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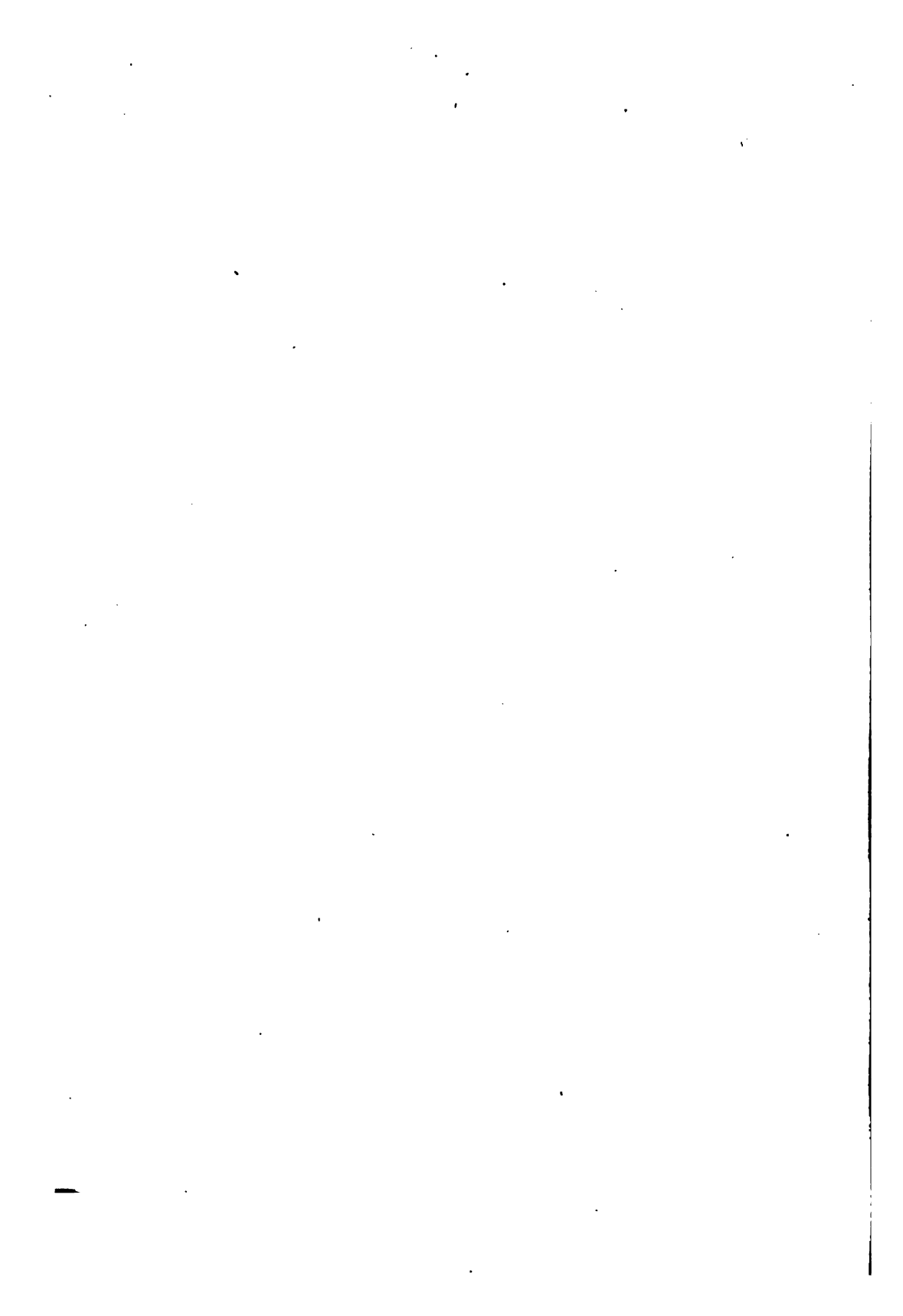


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TENTH BIENNIAL REPORT

OF THE

Bureau of Labor Statistics

FOR THE

STATE OF IOWA

1901-1902

EDWARD D. BRIGHAM

COMMISSIONER



DES MOINES:

B. MURPHY, STATE PRINTER
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LETTER OF TRANSMITTAL.

STATE OF IOWA,
OFFICE OF
COMMISSIONER OF LABOR STATISTICS,
October 1, 1903.

HON. ALBERT B. CUMMINS, *Governor of Iowa.*

SIR—In compliance with Section 2470, Chapter 8, of the Code of Iowa, I have the honor herewith to transmit to you the Tenth Biennial Report of this department.

Very respectfully,

EDWARD D. BRIGHAM.

Commissioner.

159129

SUGGESTED LEGISLATION.

SIR—The following suggestions are made as a result of the experience gained in the work of preparing the ninth and tenth biennial reports of this Bureau.

I respectfully call your attention to them and earnestly urge their recommendation.

- No. 1. Enactment of a law to restrict the employment of children for gain during the terms that schools are open and until an eighth grade certificate is furnished by city or county superintendent of schools.
- No. 2. Amend compulsory education law by requiring attendance of children between seven and fourteen years of age during the whole school year.
- No. 3. Amend fire escape law by extending authority to the Commissioner of the Bureau of Labor Statistics to enforce its provisions.
- No. 4. Enactment of a law making boiler inspection obligatory.
- No. 5. Amend the laws governing the Bureau of Labor Statistics (chapter 8 of the Code) to provide for a corps of not less than three factory inspectors and one office clerk.
- No. 6. Amend section 2474, making it obligatory for employers to report all accidents to their employes within three days after occurrence, to the Bureau of Labor Statistics.
- No. 7. Enactment of a law prohibiting any person under twenty-one years of age holding a position as telegraph operator that affects the movement of trains on railroads and requiring railroads to report all accidents to the State Executive Council.

Respectfully submitted,

To His Excellency,
Governor Albert B. Cummins.

EDWARD D. BRIGHAM,
Commissioner.

ACKNOWLEDGMENTS.

In presenting the tenth biennial report I desire to thank the various employers, city and county officials, national and local secretaries of labor organizations, secretaries of commercial exchanges and business men's associations, members of the Twenty-ninth General Assembly and all other persons who have so kindly rendered me assistance by promptly furnishing data requested.

To the members of organized labor in each locality in the state many of whom put forth special efforts to supply data my thanks are due, also to those employers for whose expressions of confidence and prompt and complete replies to my schedules I feel deeply obligated.

I desire to also make grateful mention of the daily papers in the state who kindly placed this Bureau upon their exchange lists thereby giving very material assistance to our work.

To the United States commissioner of emigration, Hon. Frank P. Sargent; Mr. James A. Holder, a student at the Iowa State College; the Hon. Richard C. Barrett, state superintendent of public instruction; and Professor F. I. Herriott, of Drake University, I am indebted for many courtesies extended during the compilation of this report.

In closing this acknowledgment I wish to make special mention of the faithful, untiring and efficient work of my deputy, Mr. Arthur E. Holder, whose devotion to the interests of the Bureau has made our labors pleasant.

HISTORY AND PURPOSE OF THE BUREAU OF LABOR STATISTICS.

On January 25, 1884, during the session of the Twentieth General Assembly there was introduced in the Senate by Senator Talton E. Clark of Clarinda, Page county, a bill for an act to create a Bureau of Labor Statistics.

The bill was referred to the committee on ways and means (Senator William Larrabee, chairman,) who reported the bill back to the Senate and recommended that the bill be referred to the committee on mines and mining. This was accordingly done and the committee on mines and mining (Senator Lewis Miles, chairman,) reported back a substitute measure which was recommended for passage. The bill was passed and messaged to the House of Representatives, that body passing the same on March 31, 1884.

On April 14, 1884, Governor Buren R. Sherman appointed, and the Executive Council confirmed, Mr. E. R. Hutchins, of Des Moines, as the first Commissioner of the Bureau of Labor Statistics of Iowa.

Mr. Hutchins was subsequently re-appointed by Governor William Larrabee in 1886 and 1888 thus serving three full terms.

In 1890 Governor Horace Boies named Mr. James R. Sovereign of Atlantic as Commissioner who was re-appointed in 1892, thus serving two terms in that capacity.

In 1894 Governor Frank D. Jackson appointed Mr. William E. O'Brien of Des Moines as Commissioner with William M. Sanger of Corydon as the first Deputy Commissioner of the Bureau.

Mr. O'Brien was re-appointed by Governor Francis M. Drake in 1896 with Mr. John Storey of Sioux City as Deputy Commis-

sioner, and in 1898 Mr. O'Brien was re-appointed by Governor Leslie M. Shaw and was given as his deputy Mr. E. A. Wilson of Cedar Rapids.

In 1900 Governor Leslie M. Shaw appointed Mr. Charles F. Wennerstrum of Fort Dodge as Commissioner and Mr. Arthur E. Holder of Sioux City as the Deputy Commissioner.

The employers and wage earners of the state by this time had become more familiar with the intent and uses of the Bureau and reciprocated to a larger degree in assisting the officials to secure reliable data, the educational people were also becoming more interested in the work of the Bureau and were making more demands upon the use of the data collected by it, they were also induced to furnish some assistance in making up the ninth biennial report which was published in 1901.

In 1902 Governor Albert B. Cummins appointed Mr. Edward D. Brigham of Des Moines as Commissioner, and Mr. Brigham selected as his Deputy Commissioner Mr. Arthur E. Holder of Sioux City.

The uses and benefits of bureaus of labor statistics are becoming more and more appreciated especially by the manual toilers and brain workers among them, at whose behest the national and state departments were created. Still there is room for a more extensive use and no hesitancy should be made by them in their demands upon the Bureau.

It stands emphatically as a clearing house for information to the business interests of the state, to the employer and employe, the brain worker and manual toiler, the investor, student or laborer.

A bureau of labor cannot of itself solve industrial or social problems, nor can it bring direct financial returns to the citizens of the state, but its work must be classed as an educational effort; by judicious investigations and by the fearless publication of facts so collected it may enable the people to more fully comprehend many of the industrial problems which now vex us.

The commissioner should be given undivided responsibility with authority to prevent abuses and indecent sanitary arrangements in factories and other establishments where laborers are assembled, and the appropriation granted by the general assembly should be sufficient for him or one of his assistants to visit every factory in the

state once every six months to see that his orders and recommendations are observed. As the case stands today in Iowa it is impossible with an allowance of only \$500 per annum to visit a third of the institutions where labor is employed, and after they are once inspected there is no way to know that the corrective suggestions are carried out in a way that is practicable or within the intent of the law.

Many people employed in various ways ask repeatedly that the conditions under which they are employed receive an investigation and correction but which is impossible to give attention to, either because there are no funds to convey the Commissioner to the place or the work and duties of the office completely take up the time of the Commissioner and his Deputy.

In twenty-three states out of the thirty-one which maintain labor bureaus, factory inspection is made an important part of the duties and is so well provided for in a financial way that complete protection is provided factory workers from unsafe machinery, unsanitary shop conditions, and full, free and easy egress allowed in case of fire.

These salutary provisions, necessary to enforce the present factory inspection law, should be made for the laborers in the workshops of Iowa, and it devolves upon every one who is interested to encourage the growth of public sentiment in this direction so that favorable legislative enactments may result.

The work of the Bureau has increased from year to year so that it has grown out of all proportion to the force employed or the amount appropriated for its maintenance and this in addition to the fact that more is required of the department than ever before.

This department has come to be the recognized authority on the resources of the state as well as on all industrial subjects. Each report is practically an advertisement of the opportunities afforded in the state to prospective investors and its work is deserving of greater encouragement.

The state of Iowa is only partially developed in a manufacturing way, great possibilities await the enterprising investors who will develop the resources of the state, and its several splendid water powers which are unused and not yet improved; factories and industrial institutions could be multiplied on almost every

hand to utilize the productivity of the state and make it one of the best in the union for a working man to live in. More and larger meat packing establishments could be used to turn our raw material in the shape of stock into finished products. In the regions where the inexhaustible coal deposits exist there are sites of value where labor could be profitably employed to a larger extent and so make the state one where labor could be assured of steady and profitable employment; all of these matters could be brought to the attention of men with money and show them the attractive field awaiting development here. The Labor Bureau is prepared to do this and could do much more in this way if a fair chance were given it.

It has been truthfully said that the man who makes two blades of grass grow where one only grew formerly is a benefactor to the race, this being an axiom how much more of a benefactor is he who does what he can to provide two jobs for a man who has to live by days wages and is practically dependent upon an employer to hire him.

There is room in Iowa for millions more wage earners and no one would feel unduly crowded or annoyed, it would stimulate our markets, make more constant the period of employment, and would react in a way that would make the farmer, business man, and laborer a greater power in the commonwealth.

Trade union officials, and especially those who have had occasion during the last two or three years to represent their fellow workers in conference with their employers, have found the Bureau of Labor Statistics a most valuable adjunct to them in the arguments they have found necessary in order to convince their employers that their wages were unnecessarily low or lower than was being paid in other sections of the state by their competitors. A word to the wise should be sufficient, trade unions should select one of their most enthusiastic members to be the statistician of the local union, and have him report to the Bureau all changes of officers, all changes or advances in wages, all changes in hours, all varying conditions of employment of whatever character, all strikes, and especially every change which takes place in their relation to their employers through the efforts of the organizations in which strikes are not resorted to, so that a ready and valuable

record can be kept, and kindred crafts when requiring information of any specific character from any of the localities in the state can obtain it by return of the mails from this clearing house of industrial information.

FACTORY INSPECTION.

This chapter consists of four parts, the first comprising a detailed table describing the physical condition of the 318 factories inspected; the second part details the orders and recommendations made by inspectors to employers with results; the third part treats on accidents fatal and non-fatal, that have occurred to employes in the workshops of our state during the biennial period, showing forty-one fatal and 750 non-fatal. The fourth part is a monograph on "The Vital Statistics of Iowa," by F. I. Herriott, Ph. D., Professor of Economics and Political Science in Drake University, Des Moines, which is considered appropriate to include in this chapter and which is commended to the earnest consideration of the students of this report.

At the conclusion of the work of this biennial period I am more fully convinced than ever that factory inspection is the most important and beneficial work that this Bureau is called upon to perform, because it brings the officers of the Bureau into close personal contact with the workers and employers, discloses actual every day conditions and provides excellent opportunities to obtain statistics of the most reliable character.

Factory inspection properly conducted from year to year will result finally in the best possible method of safeguarding machinery and its arrangement as to convenience and economy of space, also a more perfect sanitary condition, thereby bringing to the lowest possible minimum accidents to employes and sickness resulting from bad sanitary arrangements or undue expense to employers.

That this is essential no one will deny after scanning the list of recommendations to employers made by this Bureau for the

current period and the report of accidents in and around buildings and places where labor is employed.

Factory inspection is a work which has in no state or states reached perfection at a single bound, it is progressive because educational in its results, the world of employers and employes need to be taught the value of human lives, and shown how to make the persons of the workers safer.

The introduction of safety devices at first must of necessity be an appeal to the humanity, intelligence and personal interest of the employers.

The persons selected for this very important service should be those possessing tact, intelligence and a general knowledge of the principles upon which modern machines are constructed and operated, they must have the ability to quickly note defects or want of safeguards in machinery and be able to recommend such improvements as will neither interfere with the usefulness of the machine or fail to thoroughly protect the operator. One of the most important requirements of a factory inspector is the ability to detect bad sanitation; it may be easy to discover smoke, dust, or obnoxious odors but the defects of a poor system of plumbing are not so easily observed, it is therefore necessary that a factory inspector should be equipped with a knowledge of how this work should be done, and be able at all times to determine whether the sanitary surroundings are safe, and be competent to suggest practical remedies, he should know what material is necessary and what methods of construction should be adopted to carry off waste, temporary appliances of tin or galvanized iron pipe, rubber hose, etc., are positively dangerous and should not be tolerated.

There is no matter more vital to health and so little understood as scientific plumbing, air polluted with poisonous gases generated from sewers or cess pools conducted into factories and work rooms should be vigilantly guarded against by employer and employee. The factory inspector should be the state's agent to detect and prevent its presence.

When a corps of factory inspectors of this character have been selected to assist the commissioner in the work, they will be welcomed by a large per cent of the employers of the state, who will

feel as several have expressed themselves during the past two years that they regard the visits of the factory inspector a valuable assistance in determining what was best for the interests of all concerned.

The appeal to self interest, reason, and humanity have been the main influences exercised in the work in this state, in fact a successful factory inspector must rely more upon persuasion than upon the power of penalty, still it must be admitted there is a proportion of employers who will refuse to make an outlay of money in the interest of themselves or their employes without it can be forcibly conveyed to them that the state with its police powers will insist upon it.

Factory inspection laws justify themselves in at least two ways, first they save money for the manufacturer or employer by reducing the proportion of the amount of his liability for personal injury to his workpeople by removing the causes of accident. Second, and pre-eminently, legislation for the protection of employes in factories is progressive and an evidence of advancing civilization and establishes the fact that to save human lives and provide ample precautions from danger to personal injury is the most sacred duty of society.

The laws governing factory inspection now upon our statute books are such that if fully complied with would produce satisfactory results, but while that is true there is now no adequate force of inspectors to do the work, in fact, the two incumbents of the Bureau if they devoted their whole time to this work and each inspected on an average five factories per day and worked 300 days per year a part of which at least would be consumed in traveling from one locality to another they would inspect less than 3,000 factories each year and if required to make second visits at the end of ninety days to see that previous orders and recommendations had been complied with it would reduce the number of possible inspections at least fifty per cent. Even if this method were adopted it would leave no provision for the compilation of the report, which would consume at least two months of each year, which conclusively shows that there should be provided a corps of at least three factory inspectors in addition to the

present working force of the bureau and a sufficient appropriation for their maintenance.

Even with the number of factory inspectors recommended, the comparison between Iowa and other states in the same class as regards population and manufactures it would still leave Iowa at a disadvantage as the following table shows.

States.	Population.	No. of Factories.	No. of Inspectors.
Michigan	2,420,982	16,807	14
Wisconsin	2,000,042	16,187	8
Minnesota	1,741,956	11,114	5
Indiana	2,516,431	18,015	4
Iowa	2,241,853	14,819	*3

*Proposed.

In order to show more clearly the defects of the present provision for factory inspection, an examination of the following summary of orders and recommendations that were made during the current biennial period is invited.

It will be seen that out of 503 recommendations made only 187 complete compliances were obtained, five partial compliances, and in 311 cases recommendations were disregarded, at least so far as we were able to ascertain, because the fund for traveling expense was exhausted before the work was completed and when more funds were available the work of compilation of reports prevented any farther effort in that direction.

SUMMARY

Of recommendations made to employers for the care and comfort of employes.

Recommendations Classified.	Number recommendations made.	Number recommendations complied with.	Number recommendations partially complied with.	Number recommendations disregarded.
Dust blowers for emery wheels	41	20	.....	21
Elevators, safeguards for	21	18	.....	8
Fire escapes, erect d.	200	40	5	155
Fire protection, roof of boiler room	1	.....	.....	1
Floors, cleaned and renewed	8	2	.....	1
Heat and ventilation, provided	1	1	.....	.....
Locks removed, to permit safe egress	1	1	.....	.....
Machinery, prohibit operation by children	7	1	.....	6
Machinery, safeguards for	53	33	.....	22
Machinery, stopped for cleaning	1	1	.....	.....
Sewers, necessary connections for	1	1	.....	.....
Stairways, handrail- for	5	1	.....	4
Water closets, additional for employes	1	1	.....	.....
Water closets cleaned	45	23	.....	22
Water closets, separate for females	120	49	.....	71
Total	503	187	5	311

The recommendations marked as complied with are those of employers who at request of inspector notified the Bureau when compliance had been made, and those that are marked as partially complied with are the employers who notified the Bureau that work had been commenced as ordered but had not been completed, and those marked as disregarded may in reality have been complied with but on account of no such notice having been reported to the Bureau they have been marked as disregarded.

Generally speaking the county attorneys gave the Commissioner hearty co-operation and their valuable services are hereby acknowledged as highly appreciated.

FIRE ESCAPES.

Realizing that the enactment of the fire escape law somewhat modified the duties of the Commissioner as outlined in section 2470 of the Code of Iowa, and finding that in some sections of the state no efforts were being made to carry out the provisions of the law, by the local officials entrusted with its enforcement, thereby leaving employes and persons assembled in factories and

buildings unprotected against fire, the Commissioner spared no efforts to bring this important statute to the attention of the local officials. The efforts thus made were as a rule, cordially received, but with others they were either disregarded or the authority of the commissioner disputed. In order to be clear as to my duties in the matter an opinion was asked from the attorney-general which is appended and which supported the opinion held that "the Commissioner is imposed with the duty of serving notices upon agents or owners of buildings wherever they had failed to provide fire escapes, as required by law."

OPINION OF ATTORNEY-GENERAL.

STATE OF IOWA, OFFICE OF ATTORNEY-GENERAL.

SIR—You request an official opinion from this office on the question whether chapter 150 of the Acts of the Twenty-ninth General Assembly is in conflict or repeals that portion of section 2472 of the Code, as amended by section 3 of chapter 97 of the Acts of the Twenty-ninth General Assembly, which imposes upon you, as Labor Commissioner, the duty of giving notice to the owner or person in charge of a factory or building, of the failure to provide such factory or building with a fire escape for the safety of employes, and if the same is not remedied within sixty days after service of such notice, you shall give the county attorney of the county in which such factory or building is situated, written notice of the facts.

In section 4 of chapter 150 of the above acts, a like duty is imposed upon the chief of the fire department, or the mayor of each city or town where no such chief of fire department exists, or the chairman of the board of supervisors, in case such building is not within the corporate limits of any city or town, with the further requirement that such notice shall be served upon the agents or lessees of the owner or owners, providing such notice cannot be served upon the owner or owners thereof; and further provides that the notice served under this section shall command such owner, owners or agents, or either of them, to place or cause to be placed on said building such fire escape within sixty days after service of such notice.

The distinction between the duty imposed upon you as Labor Commissioner, and that imposed under section 4 of chapter 150 of the above acts, is that you are only required to serve notice that such owner or owners has failed to provide a fire escape as provided by law; while the duty imposed under section 4 of chapter 150 of the above acts requires that such notice shall command such owner, owners or agents, or either of them, to place or cause to be placed upon said building such fire escape. That is, under the first you report a failure to comply with the law while under

the latter the notice commands a compliance with the law. In this we can see no inconsistency between the duties imposed under the separate Acts of the Twenty-ninth General Assembly.

Under section 2472, as amended, you are not required to go any farther than to serve notice of the failure of such person or persons to provide such building with fire escape. Section 6 of chapter 150 of the above acts repeals acts or parts of acts only which are inconsistent with this chapter.

Having determined that the amendment to section 2472 of the Code is not inconsistent with chapter 150 of the above acts, we must therefore conclude that section 6 of chapter 150 does not repeal the amendment to section 2472, imposing upon you the duty above mentioned.

Respectfully submitted,

CHAS. A. VAN VLECK,
Assistant Attorney-General.

November 20, 1902.

Edward D. Brigham, Commissioner of Labor.

It will be seen by the above opinion that the Commissioner has no authority to command the erection of fire escapes and consequently cannot serve a legal notice; however, this difficulty was overcome in some sections by the hearty co-operation of the fire department chiefs and mayors of cities, and wherever such co-operation was extended all difficulties were overcome and ample fire protection provided.

Fire chiefs in some localities declined to either serve legal notices themselves or take any steps whatever to assist the Commissioner as may be seen by the copy of letter herein quoted.

....., Iowa, February 23, 1903.

EDWARD D. BRIGHAM, Esq., Des Moines, Iowa.

DEAR SIR—Yours of the 20th as to notices to parties as to fire escapes at hand. No, I have not served any legal notices on any parties. Several parties called upon me as to requirements and I went into details with them, but none have complied that I know of.

If you cannot get the county attorney to interest himself in the matter I don't know who will, and if these people don't consider your notice sufficient I do not see how they are to be reached.

I am otherwise engaged and am not paid a salary to afford the time nor have I the disposition to hound these people into what should be their duty to themselves as landlords or employers and shall take no steps that will make me a party to unending litigation and the ill will of a community.

This position came to me unsolicited and the duties were outlined and did not include work of this kind. I do not mean to shirk any duty in the fire department and am not afraid of any part of it, but there are some things I do not care to do and this is one of those things.

I have talked myself hoarse to show these people where a fire escape of the right kind with a stand-pipe attachment was a good thing for them but if they can't see it that relieves me.

Very truly yours,

.....
Chief Fire Department.

This letter was referred to the mayor of the city, in question, who took no action to relieve the situation during the balance of his term of office, his successor was also notified as to the condition of affairs, and promised to remedy the conditions, but later advices from citizens indicate that this has not been done. The city attorney when appealed to by the chief of the fire department advised, that, "no attention be paid to the Commissioner or his requests." This locality is still without the protection of fire escapes, according to latest advices, notwithstanding the frequent appeals of citizens to the Bureau for relief.

I therefore suggest that an amendment be made to the fire escape law, section 4999-h, of the Supplement to the Code of Iowa, "empowering the Commissioner of the Bureau of Labor Statistics to enforce the provisions of that law."

CHILD LABOR.

The employment of children under sixteen years of age in factories, stores, and other establishments is fast becoming a serious question in Iowa as well as other states and is worthy the careful thought and most serious consideration of our people.

In the work of factory inspection, in the biennial period for which we report, there was found to be employed 2,630 children under sixteen years of age in the various factories and mercantile houses.

This is by no means a complete record, as only a small proportion of factories in the state were visited and a large percentage of the children were not reported upon the employers' statistical blank, because 1,800 employers or forty-five per cent of the whole number solicited failed to make returns to the Bureau.

It is safe to say that more than double the number of children here reported are employed in the state. Between the years 1898 and 1902 the number of children reported to this Bureau as being

employed in the state has increased 322.15 per cent, the average length of work day for children is nine and one-half hours.

Children were found in some establishments who were only ten years old and many who were but twelve, the appearance of such children was pathetic in the extreme, surrounded as many were with the dirt and grime of their employment, and to realize such conditions existed in fair Iowa with no legal authority to prevent it made the work of factory inspection difficult and appealing.

The following blank form of release is presented by some employers of children in Iowa and they and their parents are required to sign the same in the presence of witnesses in order to secure employment.

COPY OF RELEASE FORM FOR CHILD EMPLOYMENT.

....., Iowa, ...190...

We the undersigned parents of.....who is about to enter the employment of the.....hereby authorize the said.....to enter into the employment of said company in any capacity or work that said company, or its agents, may hire.....to do, we hereby requesting such employment for said..... We also hereby authorize.....to make any contract or settlement with said company that.....may see fit to enter into, recognizing the fact that.....is now emancipated so far as we are concerned in all such matters, and has the full right to entirely control.....wages and time, or give such releases as.....may see fit to execute.....being competent to contract for.....self. And we also authorize said company to employ.....in any capacity or place in its works, asserting on our parts that.....is possessed of sufficient age, judgment and experience to act for.....self in such matters and is hereby so authorized to act the same as if.....were an adult.

Signatures of parents:

Witness:

.....

I.....state that I am.....years old; that I am fully competent to do the work I now apply for with said company; that I have before worked for myself at different occupations when dangerous machinery was used, but I am able to comprehend the dangers of such work, as now applied for, and if given employment by the above named company I will assume all dangers and risks of personal injury connected with such employment, and do hereby *wave* the dangers incident to the manner in which such machinery is constructed, guarded or operated.

Dated.....190...

....., Applicant.

This apparent release is intended to offer some protection to the employers in case of personal injury to any child. In the particular establishment where this release was given the Commissioner as an evidence that the employer attempted to keep a record of each child employed, it was found that one boy under sixteen had been accidentally killed, by being caught on a shaft within the past two years.

This form of release is practically a criminal conspiracy in that it contemplates the operation of dangerous machinery by children contrary to law.

It is believed that no court in Iowa would sustain this instrument or consider it a release of responsibility, but it clearly shows the intent of an employer who makes use of it.

The Compulsory Education law enacted in 1902 was a step in the right direction and its good effects where properly enforced is noticeable, but the provisions of that law are easily evaded on account of the fact that it requires no certificate to establish age of children, neither does it provide that the child shall begin attendance at any stated time during the school term, and consequently children may remain employed up to the last twelve weeks of the school term and then begin attendance at a time when the benefits to a pupil are doubtful, besides interfering with the work of other pupils who have attended continuously during the whole term.

Child labor in Iowa has at last reached a condition, it is no longer a theory, it is an evil that no amount of indifference will solve, the people of Iowa cannot afford to longer dally with the question, it should be taken up in the true Iowa way and settled. There is only one way to settle it, that is to stop it, and your Commissioner has seen enough of the evil to advise doing it at once.

In order to portray more vividly our position in the matter, and a comparison Iowa bears to the other states in the Union, I have compiled the following table from the twelfth United States Census reports.

It will be understood that this table only includes persons employed in manufactures and mechanical industries. The number of children employed in mines and mercantile institutions were not collected and tabulated by the United States Census Bureau.

TABLE

Showing how many adult persons are employed to one child in each state.

State.	Num-ber.	State.	Num-ber.	State.	Num-ber.
Alabama	14.2	Kentucky	22.4	North Dakota	63.8
Alaska	222.0	Louisiana	33.8	Ohio	78.2
Arizona	34.9	Maine	33.0	Oklahoma	53.1
Arkansas	40.2	Maryland	17.4	Oregon	57.4
California	42.1	Massachusetts	33.6	Pennsylvania	21.1
Colorado	100.7	Michigan	60.6	Rhode Island	18.6
Connecticut	49.8	Minnesota	96.5	South Carolina	4.6
Delaware	24.8	Mississippi	24.2	South Dakota	26.4
District of Columbia	211.9	Missouri	23.9	Tennessee	21.9
Florida	90.5	Montana	39.8	Texas	45.2
Georgia	12.1	Nebraska	30.5	Utah	29.8
Hawaii	113.6	Nevada	29.0	Vermont	111.0
Idaho	63.2	New Hampshire	41.6	Virginia	14.0
Illinois	33.9	New Jersey	29.0	Washington	126.6
Indiana	41.4	New Mexico	33.7	West Virginia	33.6
Indian Territory	106.1	New York	64.9	Wisconsin	24.0
Iowa	30.0	North Carolina	5.7	Wyoming	143.4
Kansas	39.9				

It will be seen that instead of Iowa taking its customary place among the galaxy of states at the head of the list, or close to it, we are humiliated with the thirty-fourth place; we find in this table compiled by the highest authority for the industries named that for every thirty adult persons employed in Iowa there was one child under sixteen years.

In the Employers' Statistical Tables found in another part of this report it will be seen that when all employing institutions are considered, mercantile as well as manufacturing and mechanical that the proportion grows worse instead of better and that it is as 56.669 adults to 2,630 children or a little over twenty-two to one instead of thirty to one as shown in the foregoing table.

This should be sufficient to prove how rapidly child labor is increasing in our state and warrants immediate restrictive legislation.

ACCIDENTS IN FACTORIES AND SHOPS.

In compliance with the requirements of section 2470 of the Code of Iowa instructing the Commissioner of the Bureau, "To report the number and character of accidents," the third part of this chapter contains a brief synopsis of the record of such accidents as have occurred in the shops and factories of the state and that was possible for the Commissioner to obtain sufficient data of, for an intelligent record.

During the period that has elapsed from the thirty-first of December, 1900, until the first of October, 1903, a record of 791 accidents have been secured of which forty-one were fatal and 750 non-fatal.

This report covers only such establishments as were inspected or those that were reported on the employers' statistical blank and cannot therefore be considered as complete, neither does it include accidents that have happened in mines or on any of the railroads, because such accidents as happen in mines are reported by the operators to the mine inspectors for record according to statute and are therefore beyond the province of the Commissioner to include. The railroad accidents are mentioned in another portion of this report.

There is, however, sufficient evidence presented to indicate the need of a similar provision of law to apply to employers of all kinds, requiring a report of all accidents to the Bureau of Labor Statistics in the same manner as mine accidents are reported to the mine inspectors, in order that the legislature may be intelligently advised as to the actual number and character of the accidents that occur in the state, and be enabled to provide remedies for their prevention.

FACTORY INSPECTION—

Giving height of buildings, means of entrance and exit,

APPANOOSE

Marginal number.	Industry.	Number of stories in factory.	Number of stairways	Are fire escapes provided?	Elevators.	
					Number of	How guarded.
1	Brick and tile	1	2	No.	.....	.....
2	Electric light company	2	1	No.	.....	.....
3	Hardware and implements	2	2	No.	1	Bars.
4	Laundry	1	.....	No.	.....	.....

ORDERS AND RECOMMEN

a Guard fly wheel;

b Plant undergoing alter

BLACK HAWK

5	Broom factory	2	1	No.	1	Gates.
6	Boiler works	1	.....	.....	.....	.....
7	Bottling works	2	2	No.	a 1	Doors.
8	Canning factory	3	1	No.	.....	Gates.
9	Cream separator works	1	1	No.	None.	.....
10	Candy factory	2	1	No.	1	Gates.
11	Cigar factory	2	2	No.	1	Doors.
12	Cigar factory	2	3	No.	None.	.....
13	Creamery supply company	5	1	d No.	1	Gates.
14	Gas engine factory	2	2	No.	No.	.....
15	Grinder and steamer works	2	2	No.	No.	.....
16	Gasoline engine company	2	2	No.	No.	.....
17	Gas and electric company	1	.....	.....	No.	.....
18	Harness and saddlery	6	1	Yes.	1	Gates.
19	Harness and saddlery	4	1	Yes.	1	Gates.
20	Mattress factory	2	1	No.	No.	.....
21	Refrigerator factory	2	2	No.	1	f Bars
22	Packing house	3	2	Yes.	2	Gates.
23	Printing house	2	1	No.	No.	.....
24	Steel tank factory	1	.....	.....	No.	.....
25	Steel tank factory	3	2	No.	1	Gates.
26	Sash and door factory	1	1	No.	No.	.....
27	Skirt factory	2	1	No.	No.	.....

ORDERS AND RECOMMEN

a Guard elevator at first floor;

b Apply dust blowers;

c Provide

e Clean closets;

f Repair and use elevator gates.

BOONE

28	Cigar factory	2	2	No.	No.	.....
29	Glove and mitten factory	2	1	No.	No.	.....
30	Harness and collar factory	3	2	a No.	1	Gates.
31	Laundry	2	1	No.	No.	.....

ORDERS AND RECOMMEN

a Put up fire escapes;

b Put

TABLE No. 1.

ventilation, sanitation, condition of power and machinery.

COUNTY.

Ventila- tion of work- rooms.	Are dust blowers pro- vided?	Water Closets			Protection of ma- chinery.	Num- ber of acci- dents since 1900.	Boiler in- spections. How often?	Mar- ginal num- ber.
		Descrip- tion of.	Separate for fe- males.	Condition.				
Good.		Earth.	.....	Fair.	a Poor.	None.	30 days.	1
Good.		Earth.	.....	Fair.	b Fair.	None.	60 days.	2
Good.		Earth.	.....	Fair.	.....	None.	.....	3
Good.		Earth.	c No.	Good.	Good.	None.	None.	4

NOTATIONS BY INSPECTOR.

a Provide separate closets for females.

COUNTY.

Good.	.....	Earth.	.....	Poor.	Good.	1	.....	5
Good.	.....	Flush.	.....	Good.	Good.	None.	90 days.	6
Good.	.....	Flush.	Yes.	Good.	Good.	None.	90 days.	7
Good.	.....	Earth.	Yes.	Clean.	Good.	1	90 days.	8
Good.	b No.	Flush.	c No.	Good.	Good.	None.	15 days.	9
Good.	.....	Flush.	Yes.	Good.	Good.	None.	90 days.	10
Good.	.....	Flush.	Yes.	Good.	Good.	None.	90 days.	11
Good.	.....	Flush.	No.	Good.	Good.	None.	.....	12
Good.	.....	Flush.	No.	Good.	Good.	None.	.....	13
Good.	b	Flush.	No.	Good.	Good.	None.	None.	14
Good.	b	Earth.	c No.	Fair.	Good.	1	.....	15
Good.	b	Flush.	Yes.	e Fair.	Good.	None.	12 months.	16
Good.	No.	None.	None.	.....	Fair.	1	90 days.	17
Good.	No.	Flush.	Yes.	Fair.	Good.	1	90 days.	18
Good.	No.	Flush.	Yes.	Good.	Good.	1	.....	19
Good.	No.	Flush.	Yes.	Good.	Good.	None.	.....	20
Fair.	Yes.	Flush.	No.	Fair.	Good.	None.	6 months.	21
Good.	No.	Earth.	c No.	Fair.	Good.	None.	90 days.	22
Good.	No.	Flush.	Yes.	Good.	Good.	None.	.....	23
Good.	No.	Flush.	Yes.	Fair.	Good.	None.	.....	24
Good.	No.	Flush.	No.	Good.	Good.	None.	.....	25
Good.	b Yes.	Flush.	No.	Good.	Good.	1	90 days.	26
Good.	No.	Flush.	Yes.	Good.	Good.	None.	.....	27

NOTATIONS BY INSPECTOR.

a Provide separate closets for females; b Comply with law in regard to fire escapes;

COUNTY.

Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	28
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	29
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	30
Good.	Yes.	Earth.	b No.	Good.	Good.	1	6 months.	31

NOTATIONS BY INSPECTOR.

a Provide separate closets for females.

FACTORY INSPECTION—

CLINTON

Mar- ginal num- ber.	Industry.	Num- ber of stor- ies in fac- tory.	Num- ber of stair- ways.	Are fire es- capes pro- vided?	Elevators.	
					Number of	How guarded.
32	Bridge and iron works.....	2	1	No.	No.	.....
33	Building paper.....	2	1	No.	1	Enclosed.
34	Box shook factory.....	2	2	No.	No.	.....
35	Bed spring factory.....	2	1	No.	No.	.....
36	Ciga factory.....	3	1	No.	No.	.....
37	Cream separator factory.....	2	1	No.	No.	.....
38	Cracker factory.....	2	1	No.	1	Bars.
39	Fur iture factory.....	2	2	No.	1	Gates.
40	Furniture factory.....	3	2	No.	1	Gates.
41	Harness and saddlery factory.....	2	1	No.	1	Bars.
42	Skirt factory.....	2	1	No.	No.	.....
43	Steel lock's factory.....	2	2	No.	1	Gates.
44	Sash and door factory.....	3	4	No.	4	g None.
45	Upholstered furniture factory.....	3	1	No.	No.	.....

ORDERS AND RECOMMEN

a Apply dust blowers as required by law; b Guard fly wheel and main gear;
closets; c Equip buildings with fire escapes; f Provide separate closets for
equip stairways with hand rail.

DES MOINES

46	Basket factory.....	2	2	No.	1	Gates.
47	Bit on factory.....	3	2	a Yes.	1	Doors.
48	Cigar factory.....	4	1	Yes.	1	Doors.
49	Desk factory.....	4	4	Yes.	2	Doors.
50	Engines and boiler shop.....	2	4	No.	1	c None.
51	Furniture factory.....	3	1	a No.	1	c None.
52	Furniture factory.....	5	5	f Yes.	6	Gates.
53	Laundry.....	2	2	No.	1	c None.
54	Leather and saddlery factory.....	4	1	Yes.	2	Gates.
55	Sash and door factory.....	2	3	No.	No.	.....
56	Sash and door factory.....	2	2	No.	No.	.....
57	Soap factory.....	3	2	Yes.	2	Gates.
58	Vehicle Wheel fact ry.....	2	1	No.	1	Gates.
59	Vinegar and pickl factory.....	1	1	No.	1	c None.
60	Wagon factory.....	4	2	a No.	3	c None.

ORDERS AND RECOMMEN

a Comply with law in regard to fire escapes; b Repair closets for cutting plant;
barrel; c Repair closets so as to flush properly; f Equip mattress depart
rail around outside stairway; h Clean closets; i Put a hand rail on stair
closets for females as required by law.

DUBUQUE

61	Broom factory.....	3	1	a No.	1	b None.
62	Candy factory.....	4	2	a No.	1	Gates.
63	Carriage factory.....	6	1	a No.	1	Gates.
64	Cigar factory.....	3	1	a No.	1	Gates.
65	Cigar factory.....	4	1	a No.	1	Doors.
66	Cigar factory.....	2	1	No.	No.	.....
67	Engine and boiler shop.....	3	1	a No.	1	Bars.
68	Pearl button factory.....	3	4	a No.	3	Gates.
69	Pump and plumbing factory.....	2	2	No.	2	b Bars.
70	Overalls and jacket factory.....	4	2	a No.	2	Gates.
71	Overalls and jacket factory.....	4	2	a No.	1	Bars.
72	Overalls and jacket factory.....	4	4	Yes.	2	Bars.
73	Overalls and jacket factory.....	5	1	a No.	1	Doors.
74	Overalls and pants factory.....	5	2	a No.	1	Gates.
75	Shoe factory.....	2	1	No.	1	Doors.
76	Shoe factory.....	3	2	a No.	None.	.....

ORDERS AND RECOMMEN

a Equip building with fire escape as required by law; b Guard elevators
ply dust blowers on emery wheels and tumbling barrel.

TABLE No. 1—CONTINUED.

COUNTY.

Ventilation of work-rooms.	Are dust blowers provided?	Water Closets.			Protection of machinery.	Number of accidents since 1900.	Boiler inspections. How often?	Marginal number.
		Description of.	Separate for females.	Condition.				
Good.	a No.	Earth.	Yes.	Good.	Good.	None.	90 days.	12
Fair.	No.	Flush.	Yes.	Good.	b Bad.	None.	90 days.	33
Good.	Yes.	Flush.	Yes.	Good.	c Good.	None.	90 days.	34
Good.	No.	Earth.	No.	d Filthy.	c Good.	3	90 days.	35
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	36
Good.	No.	Flush.	No.	Good.	Good.	None.	90 days.	37
Good.	No.	Flush.	f No.	Good.	Good.	None.	90 days.	38
Good.	Yes.	Earth.	No.	d Filthy.	Good.	None.	90 days.	39
Good.	Yes.	Earth.	Yes.	d Filthy.	Good.	1	90 days.	40
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	41
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	42
Good.	Yes.	Flush.	Yes.	Good.	Good.	2	90 days.	43
Good.	Yes.	Flush.	No.	Good.	Bad.	None.	90 days.	44
Good.	Yes.	Earth.	Yes.	Good.	Good.	None.	90 days.	45

NOTES BY INSPECTOR.

c Comply with law regarding children operating dangerous machinery; d Clean females; g Guard elevators properly; h Guard belt to surfacing machine and

COUNTY.

Good.	No.	Earth.	Yes.	Good.	Good.	1	90 days.	46
Good.	Yes.	Flush.	Yes.	b Fair.	Good.	1	90 days.	47
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	48
Good.	Yes.	Flush.	Yes.	Good.	Good.	1	90 days.	49
Good.	d No.	Flush.	Yes.	Good.	Good.	2	90 days.	50
Good.	Yes.	Flush.	No.	e Poor.	Good.	2	90 days.	51
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	90 days.	52
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	90 days.	53
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	54
Good.	Yes.	Earth.	No.	Good.	g Fair.	None.	90 days.	55
Good.	No.	Earth.	j No.	h Bad.	Bad.	None.	90 days.	56
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	90 days.	57
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	90 days.	58
Good.	No.	Flush.	Yes.	h Filthy.	Good.	None.	90 days.	59
Good.	Yes.	Flush.	No.	Good.	Good.	None.	90 days.	60

NOTES BY INSPECTOR.

c Guard elevators properly; d Apply dust blowers on emery wheels and tumbling ment with fire escape; g Box counter shaft on second floor of mill and put a hand ways and box counter shafts on circular saw shaper and scroll saw; j Provide

COUNTY.

Good.	No.	Flush.	d No.	c Filthy.	Good.	None.	90 days.	61
Good.	No.	Flush.	Yes.	c Fair.	Good.	None.	90 days.	62
Good.	No.	Earth.	No.	Good.	Good.	None.	90 days.	63
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	64
Good.	No.	Earth.	Yes.	Good.	Good.	None.	90 days.	65
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	66
Good.	No.	Earth.	d No.	c Filthy.	Good.	1	90 days.	67
Good.	No.	Flush.	Yes.	c Fair.	Good.	None.	90 days.	68
Good.	e No.	Flush.	Yes.	Good.	Fair.	2	90 days.	69
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	70
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	71
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	72
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	73
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	74
Good.	No.	Flush.	Yes.	Good.	Good.	1	90 days.	75
Good.	No.	Flush.	d No.	Good.	Good.	None.	90 days.	76

NOTES BY INSPECTOR.

properly; c Clean closets; d Provide separate closets for females; e Ap-

FACTORY INSPECTION—

HARRISON

Marginal number.	Industry.	Number of stories in factory.	Number of stairways.	Are fire escapes provided?	Elevators.	
					Number of	How guarded.
77	Electric light company.....	1	None.	No.	None.	.....
78	Machine shop	1	1	No.	None.	.....

ORDERS AND RECOMMEN

a Provide separate closets for females;

KOSSUTH

79	Bottling factory	1	None.	No.	None.	.....
80	Cigar factory	2	1	No.	None.	.....
81	Foundry and machine shop.	2	1	No.	None.	.....
82	Stock tank and tub factory.	2	1	No.	None.	.....
83	Hotel	3	8	a No.	None.	.....

ORDERS AND RECOMMEN

a Equip building with fire escape as required by law.

LEE

84	Building material factory.....	2	1	No.	1	Gates.
85	Building material factory.....	2	4	No.	1	Bars.
86	Butter renovating factory.....	4	1	b No.	1	Gates.
87	Canning factory	3	3	b No.	2	Gates.
88	Carriage and wagon factory	2	1	No.	1	Doors.
89	Carriage and wagon factory	2	1	No.	1	Bars.
90	Cigar factory	1	None.	No.	None.	.....
91	Cooperage factory.	1	None.	No.	None.	.....
92	Foundry	2	2	No.	None.	.....
93	Garment factory	1	1	No.	1	Bars.
94	Hotel	3	3	b No.	None.	.....
95	Laundry	3	3	b No.	None.	.....
96	Laundry	2	2	No.	None.	.....
97	Machine shop.....	1	None.	None.	None.	.....
98	Plow and harrow factory.....	4	3	b No.	2	c None.
99	Plumbing and tin shop	2	1	Yes.	None.	.....
100	Poultry packing house	2	2	b No.	3	Gates.
101	Printing and publishing house	3	3	b No.	1	Doors.
102	Printing and publishing house	3	1	b No.	2	Bars.
103	Shoe factory	4	3	b No.	2	Doors.
104	Starch factory	3	1	b No.	1	None.

ORDERS AND RECOMMEN

a Guard set screw on line shaft and use elevator gates constantly; b Equip
 keep gates in constant use; d Put dust blowers on emery wheels; e Clean
 be inspected once in three months; A Provide separate closets for females.

TABLE No. 1—CONTINUED.

COUNTY.

Ventilation of work-rooms.	Are dust blowers provided?	Water Closets.			Protection of machinery.	Number of accidents since 1900.	Boiler inspections—How often?	Marginal number.
		Description of.	Separate for females.	Condition.				
Good.	No.	Earth.	a No.	Fair.	Good.	None.	90 days.	77
b Poor.	No.	Earth.	No.	c Filthy.	Good.	None.	60 days.	78

DATIONS BY INSPECTOR.

b Repair smoke jacks in shop; c Clean closets.

COUNTY.

Good.	No.	Earth.	No.	Good.	Good.	None.	None.	79
Good.	No.	Earth.	No.	Good.	Good.	None.	None.	80
Good.	No.	Earth.	No.	Good.	Good.	None.	15 days.	81
Good.	Yes.	Earth.	No.	Fair.	Good.	None.	90 days.	82
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	83

DATIONS BY INSPECTOR.

COUNTY.

Good.	Yes.	Flush.	No.	Good.	a Fair.	None.	6 months.	84
Good.	Yes.	Flush.	Yes.	Good.	Good.	3	90 days.	85
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	86
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	87
Good.	No.	Flush.	No.	Good.	Good.	1	None.	88
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	89
Good.	No.	Earth.	No.	Good.	Good.	None.	None.	90
Good.	No.	Earth.	No.	Good.	Good.	None.	90 days.	91
Good.	d No.	Earth.	No.	Good.	Good.	None.	6 months.	92
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	93
Good.	No.	Flush.	Yes.	e Bad.	Good.	None.	None.	94
Good.	No.	Earth.	Yes.	Good.	Good.	None.	90 days.	95
Good.	No.	Flush.	h No.	Good.	Good.	None.	90 days.	96
Good.	Yes.	i None.	No.	Good.	Good.	None.	None.	97
Fair.	d No.	Earth.	Yes.	e Filthy.	f Poor.	1	90 days.	98
Good.	No.	Flush.	No.	Good.	Good.	None.	90 days.	99
Good.	No.	Flush.	No.	Fair.	Good.	None.	90 days.	100
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	101
Good.	No.	Flush.	Yes.	Good.	Good.	None.	6 months.	102
Good.	Yes.	Flush.	Yes.	Good.	Good.	6	g None.	103
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	None.	104

DATIONS BY INSPECTOR.

buildings with fire escapes as required by law; c Guard elevators properly and closets; f Guard set screws on line shaft in gang plow shop; g Boilers should

FACTORY INSPECTION—

LINN

Marginal number.	Industry.	Number of stories in factory.	Number of stairways.	Are fire escapes provided?	Elevators.	
					Number of	How guarded.
105	Blank book factory.....	8	2	a No.	1	Doors.
106	Bottling factory.....	2	2	No.	None.	
107	Candy factory.....	2	3	No.	1	b Doors.
108	Cereal mills.....	6	12	Yes.	8	Gates.
109	Cigar factory.....	1	2	No.	None.	
110	Cracker factory.....	3	2	d Yes.	2	Gates.
111	Cutlery factory.....	2	1	No.	1	Bars.
112	Flour mill.....	2	3	Yes.	None.	
113	Furniture factory.....	3	3	a No.	1	Doors.
114	Hotel.....	3	3	Yes.	None.	
115	Iron pump factory.....	2	1	No.	2	Gates.
116	Laundry.....	2	1	None.	None.	
117	Laundry.....	2	1	No.	None.	
118	Machine shop.....	2	1	No.	2	Bars.
119	Machine shop.....	2	2	No.	None.	
120	Medicine factory.....	2	2	No.	1	Doors.
121	Newspaper office.....	2	2	No.	None.	
122	Packing house.....	4	17	d Yes.	9	Gates.
123	Sash and door factory.....	2	3	Yes.	1	Gates.
124	Upholstered furniture factory.....	3	1	a No.	None.	
125	Wagon factory.....	3	2	a No.	1	Bars.

ORDERS AND RECOMMENDATIONS

a Equip buildings with fire escapes as required by law; b Keep elevator gates closed between buildings. Put a guard around horizontal engine in engine room, and put shaft between buildings. Put a guard around horizontal engine in engine room, and put with the law in regard to emery wheels and emery belts; f Put in a larger flush water closet for men; i Put a guard around main drive belt; j Clean closets; room and cover large belt at angle pulley in same locality.

MAHASKA

126	Bakery.....	2	2	Yes.	None.	
127	Bakery.....	2	2	No.	1	Gates.
128	Cigar factory.....	2	1	No.	1	Bars.
129	Cigar factory.....	2	3	No.	None.	
130	Cigar factory.....	2	1	No.	None.	
131	Egg and poultry packers.....	2	1	No.	1	Rail.
132	Laundry.....	2	1	No.	2	Rail.
133	Overalls and jacket factory.....	2	3	No.	1	Gate.
134	Sash and door factory.....	1	1	No.	None.	
135	Waterworks.....	1	No.	No.	None.	

ORDERS AND RECOMMENDATIONS

(a) Boiler should be inspected.

TABLE No. 1—CONTINUED.

COUNTY.

Ventila- tion of work- rooms.	Are dust blowers pro- vided?	Water Closets.			Protection of mar- chinery.	Num- ber of accid- ents since 1900.	Boiler in- spections. How often?	Mar- ginal num- ber.
		Description of.	Separate for fe- males.	Condition.				
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	106
Good.	No.	Earth.	No.	Good.	Good.	None.	90 days.	106
Good.	No.	Flush.	Yes.	Fair.	Good.	None.	90 days.	107
Good.	Yes.	Flush.	Yes.	Good.	c Fair.	2	90 days.	108
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	109
Good.	Yes.	Flush.	Yes.	f Fair.	Good.	2	90 days.	110
Good.	e No.	Flush.	Yes.	Good.	Fair.	None.	None.	111
Good.	Yes.	Earth.	No.	Good.	Good.	None.	90 days.	112
Good.	No.	Flush.	g No.	Good.	Good.	None.	None.	113
Good.	No.	Flush.	Yes.	Good.	Good.	None.	80 days.	114
Good.	e No.	Flu-h.	g No.	Good.	Good.	None.	90 days.	115
Good.	Yes.	Flush.	g No.	Good.	t Fair.	None.	60 days.	116
Good.	Yes.	h Flush.	Yes.	Good.	t Fair.	None.	6 months.	117
Good.	e No.	Earth.	No.	j Bad.	Good.	None.	15 days.	118
Good.	No.	Earth.	No.	j Bad.	Good.	None.	None.	119
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	120
Good.	No.	Flush.	g No.	Good.	Good.	None.	90 days.	121
Fair.	No.	Flush.	Yes.	k Fair.	l Fair.	3	90 days.	122
Good.	Yes.	Flush.	g No.	Good.	Good.	9	90 days.	123
Good.	No.	Flush.	Good.	Good.	Good.	None.	None.	124
Good.	Yes.	Flush.	No.	Good.	Go d.	None.	None.	125

DATIONS BY INSPECTOR.

in constant use; c Guard belt on top floor of elevator B. Protect set screw on line
a guard around feed grinders; d Put on additional fire escapes; e Comply
tank in women's closet; g Provide separate closets for females; h Put in a
k Put a roof on closet on shipping platform; l Guard set screw on shaft in lard

COUNTY.

Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	126
Fair.	No.	Flush.	No.	Good.	Good.	None.	None.	127
Fair.	No.	Earth.	No.	Fair.	Good.	None.	None.	128
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	129
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	130
Good.	No.	Earth.	No.	Good.	Good.	None.	None.	131
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	132
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	None.	133
Good.	Yes.	Earth.	No.	Good.	Good.	2	a None.	134
Good.	No.	Earth.	No.	Good.	Good.	None.	90 days.	135

DATIONS BY INSPECTOR.

ed at least every 90 days.

FACTORY INSPECTION—
MARSHALL

Mar- ginal num- ber.	Industry.	Num- ber of stor- ies in fac- tory.	Num- ber of stair- ways.	Are fire es- cape pro- vided?	Elevators.	
					Number of	How guarded.
136	Axle grease and oil factory.....	2	1	No.	1	Bars.
137	Cigar factory.....	2	2	No.	None.	.....
138	Cigar factory.....	2	1	No.	None.	.....
139	Governor factory.....	2	1	No.	None.	.....
140	Laundry.....	2	1	No.	None.	.....
141	Laundry.....	2	1	No.	None.	.....
142	Machine shop.....	2	3	No.	1	Bars.
143	Machine shop.....	2	2	No.	None.	.....
144	Printing shop.....	2	2	No.	1	Gates.
145	Packing house.....	3	4	No.	3	Bars.
146	Steel mat factory.....	2	1	No.	1	Gates.
147	Sash and door factory.....	2	2	No.	None.	.....
148	Syrup and candy factory.....	2	1	No.	1	Gates.
149	Trowel factory.....	2	1	No.	None.	.....
150	Vinegar and pickle factory.....	3	4	No.	1	Gates.

ORDERS AND RECOMMEN

a Provide closets for men; b Provide separate closets for females; c Box gear;
f Apply dust blowers on emery wheels and tumbling barrels; g Clean
i Provide fire escapes according to law.

MONROE

151	Electric light company.....	1	.....	No.	None	.....
152	Hotel.....	3	2	a No.	None	.....

ORDERS AND RECOMMEN

a Equip buildings with fire

MONTGOMERY

153	Butter tub factory.....	2	1	No.	None.	.....
154	Cigar factory.....	2	1	No.	None.	.....
155	Hotel.....	3	4	a No.	None.	.....
156	Laundry.....	2	1	No.	None.	.....
157	Steel tank factory.....	2	1	No.	None.	.....
158	Steel tank factory.....	2	3	No.	None.	.....

ORDERS AND RECOMMEN

a Equip buildings with fire

TABLE NO. 1—CONTINUED.

COUNTY.

Ventilation of work-rooms.	Are dust blowers provided?	Water Closets.			Protection of machinery.	Number of accidents since 1900.	Boiler inspections. How often?	Marginal number.
		Description of.	Separate for females.	Condition.				
Good.	No.	Flush.	Yes.	Good.	Good.	None.	6 months.	136
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	137
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	138
Good.	No.	<i>a</i> Flush.	Yes.	Good.	Good.	None.	6 months.	139
Good.	No.	Flush.	<i>b</i> No.	Good.	<i>c</i> Fair.	None.	90 days.	140
Good.	No.	Flush.	<i>b</i> No.	<i>d</i> Bad.	<i>e</i> Bad.	None.	90 days.	141
Good.	<i>f</i> No.	Earth.	Yes.	<i>g</i> Bad.	<i>h</i> Fair.	2	6 months.	142
Good.	<i>f</i> No.	Earth.	No.	<i>g</i> Filthy.	<i>i</i> Fair.	1	6 months.	143
Good.	No.	Flush.	<i>b</i> No.	Good.	Good.	None.	90 days.	144
Good.	Yes.	Earth.	Yes.	<i>g</i> Poor.	Good.	None.	90 days.	145
Good.	No.	Flush.	<i>b</i> No.	Good.	Good.	None.	None.	146
Good.	No.	Earth.	No.	<i>g</i> Filthy.	Good.	None.	None.	147
Good.	No.	Earth.	Yes.	Fair.	Good.	None.	90 days.	148
Good.	<i>f</i> No.	Flush.	No.	Good.	Fair.	None.	None.	149
Fair.	No.	Earth.	<i>b</i> No.	Bad.	Good.	None.	90 days.	150

DATIONS BY INSPECTOR.

belt on extractor; *d* Provide flush tank for closet now in use; *e* Guard mangle closets; *h* Pat a guard on bend roller; *i* Guard bevel gear on iron saw in shop;

COUNTY.

Good.	No.	Earth.	Yes.	Good.	Good.	1	6 months.	151
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	152

DATIONS BY INSPECTOR.

escapes as required by law.

COUNTY.

Good.	No.	Earth.	No.	Good.	Good.	None.	6 months.	153
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	154
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	155
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	156
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	157
Good.	Yes.	Earth.	Yes.	Good.	Good.	None.	90 days.	158

DATIONS BY INSPECTOR.

escapes as required by law.

FACTORY INSPECTION—

MUSCATINE

Marginal number.	Industry.	Number of stor-ies in fac-tory.	Num-ber of stair-ways.	Are fire es-capes pro-vided?	Elevators.	
					Number of	How guarded.
159	Cereal mill	4	3	a No.	2	b Gates.
160	Cigar factory	2	1	No.	None.	
161	Cigar factory	4	1	a No.	1	Doors.
162	Foundry	1	No.	No.	None.	
163	Gasoline engine & machine factory	2	1	No.	None.	
164	Laundry	1	No.	No.	None.	
165	Machine shop	3	3	a No.	None.	
166	Pearl button factory	2	2	No.	None.	
167	Pearl button factory	1	None.	No.	None.	
168	Pearl button factory	1	1	No.	None.	
169	Pearl button factory	1	None.	No.	None.	
170	Pearl button factory	1	None.	No.	None.	
171	Pearl button factory	2	None.	No.	None.	
172	Pearl button factory	2	1	No.	None.	
173	Pearl button factory	2	1	No.	None.	
174	Pearl button factory	1	1	No.	1	Doors.
175	Pearl button factory	3	3	Yes.	1	Doors.
176	Pearl button factory	2	2	No.	1	Doors.
177	Pearl button factory	1	No.	No.	No.	
178	Pearl button factory	1	No.	No.	No.	
179	Pearl button factory	3	2	a No.	1	Doors.
180	Sash and door factory	3	9	a No.	2	b None.
181	Sash and door factory	3	5	a No.	3	Doors.
182	Stave machine factory	2	1	No.	None.	

ORDERS AND RECOMMEN

a Equip buildings with fire escapes as required by law; b Guard all openings as required by law; c Boilers should be inspected once in 90 days; d Clean and g Basement unsanitary; provide sewer and a new floor; h Box pulley on jack shaft

POLK

183	Bakery	1	No.	No.	None.	
184	Bakery	4	5	a No.	1	Doors.
185	Bicycle factory	2	1	No.	1	Doors.
186	Bottling works	2	2	No.	None.	
187	Brick plant	2	1	No.	None.	
188	Broom factory	2	1	No.	1	Gates.
189	Candy factory	3	1	Yes.	1	Doors.
190	Cigar factory	2	1	No.	1	Doors.
191	Engraving shop	2	1	No.	None.	
192	Furniture factory	4	4	a No.	2	Gates.
193	Garment factory	2	2	No.	1	Doors.
194	Glove factory	3	2	d Yes.	1	Bars.
195	Laundry	2	1	No.	1	Doors.
196	Linseed oil factory	3	4	a No.	None.	
197	Manufacturing chemist	2	1	No.	1	Gates.
198	Newspaper office	3	2	a No.	1	Gates.
199	Paper box factory	2	1	No.	1	Gates.
200	Planing mill	2	2	No.	None.	
201	Printing shop	2	1	No.	None.	
202	Pump factory	1	No.	No.	None.	
203	Scale factory	1	No.	No.	None.	
204	Sheet metal shop	3	2	Yes.	2	Doors.
205	Skirt factory	3	2	Yes.	1	e None.
206	Suspender factory	2	2	No.	None.	
207	Tank factory	3	3	No.	1	Gates.
208	Tent and awning factory	2	2	Yes.	None.	
209	Trunk factory	4	3	a No.	2	Gates.
210	Vinegar and pickle factory	3	1	a No.	1	Gates.
211	Vinegar and pickle factory	3	1	a No.	1	Gates.

ORDERS AND RECOMMEN

a Equip buildings with fire escapes as required by law; b Boilers should be locks from doors to prevent egress on ground floor; c Guard elevator properly;

TABLE No. 1—CONTINUED.

COUNTY.

Ventilation of work-rooms.	Are dust blowers provided?	Water Closets.			Protection of machinery.	Number of accidents since 1900.	Boiler inspections. How often?	Marginal number.
		Description of.	Separate for females.	Condition.				
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	159
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	160
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	161
Good.	c No.	Earth.	Yes.	Fair.	Fair.	None.	90 days.	162
Good.	No.	Flush.	No.	Fair.	Good.	None.	None.	163
Good.	No.	Flush.	Yes.	Good.	Good.	None.	d None.	164
Good.	c No.	Flush.	Yes.	Good.	Good.	None.	15 days.	165
Good.	No.	Earth.	No.	Fair.	Good.	None.	d No.	166
Good.	Yes.	Earth.	No.	e Filthy.	Good.	None.	15 days.	167
Good.	No.	Earth.	No.	Filthy.	Good.	None.	15 days.	168
Good.	No.	Earth.	No.	Good.	Good.	None.	15 days.	169
Good.	No.	Earth.	No.	Good.	Good.	None.	90 days.	170
Good.	Yes.	Flush.	Yes.	Good.	Good.	1	90 days.	171
Good.	Yes.	Flush.	Yes.	Good.	Good.	1	None.	172
Good.	Yes.	Flush.	Yes.	e Fair.	f Good.	None.	80 days.	173
g Poor.	Yes.	Flush.	Yes.	e Filthy.	d No.	None.	d No.	174
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	None.	175
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	176
Good.	Yes.	Earth.	No.	Fair.	Good.	None.	90 days.	177
Good.	No.	Earth.	No.	Fair.	Good.	None.	None.	178
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	179
Good.	Yes.	Earth.	No.	e Filthy.	h Fair.	4	90 days.	180
Good.	Yes.	Flush.	i No.	Fair.	Good.	22	15 days.	181
Good.	c No.	Flush.	No.	Good.	Good.	None.	d No.	182

NOTES BY INSPECTOR.

to elevator shafts; c Apply dust blowers on all emery wheels and tumbling barrels
 repair closets; y Employees must not be allowed to clean machinery while in motion;
 on cutting room floor; i Provide separate closets for females.

COUNTY.

Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	188
Good.	No.	Flush.	No.	Good.	Good.	1	6 months.	184
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	185
Good.	No.	Flush.	Yes.	Good.	Good.	None.	7 days.	186
Good.	No.	Earth.	No.	Good.	Good.	None.	15 days.	187
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	None.	188
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	189
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	190
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	191
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	192
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	None.	193
Good.	No.	Flu-h.	Yes.	c Poor.	Good.	None.	b No.	194
Good.	No.	Flush.	Yes.	Good.	Good.	1	90 days.	195
Good.	No.	Flush.	No.	Good.	Good.	8	90 days.	196
Good.	No.	Flush.	Yes.	Good.	Good.	1	None.	197
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	198
Good.	No.	Flush.	Yes.	Good.	Good.	2	90 days.	199
Good.	Yes.	Flush.	No.	Good.	Good.	None.	15 days.	200
Good.	No.	Flu-h.	Yes.	Good.	Good.	None.	None.	201
Good.	No.	Earth.	No.	Good.	Good.	None.	None.	202
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	203
Good.	No.	Earth.	No.	Fair.	Good.	None.	None.	204
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	205
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	206
Good.	No.	Earth.	No.	Good.	Good.	None.	6 months.	207
Good.	No.	Flu-h.	Yes.	Good.	Good.	2	None.	208
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	209
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	210
Good.	No.	Flush.	f No.	Good.	Good.	None.	90 days.	211

NOTES BY INSPECTOR.

inspected once in 90 days; c Clean and disinfect water closets; d Remove
 f Provide separate closets for females.

FACTORY INSPECTION—
POTTAWATTAMIE

Marginal number.	Industry.	Number of stories in factory.	Number of stairways.	Are fire escapes provided?	Elevators.	
					Number of	How guarded.
212	Basket factory	2	1	No.	None.	.....
213	Carriage factory	3	1	Yes.	1	Barr.
214	Cream separator factory	3	2	a No.	1	Doors.
215	Cigar factory	1	No.	a No.	None.	.....
216	Cigar factory	3	1	a No.	1	Doors.
217	Cigar factory	2	1	a No.	None.	.....
218	Cigar factory	3	1	a No.	1	c No.
219	Confectionery factory	4	2	a No.	2	e Gates.
220	Elevator and scale factory	2	1	a No.	4	Gates.
221	Flour mill	3	1	Yes.	1	Gates.
222	Flour mill	3	1	a No.	None.	.....
223	Hotel	3	2	Yes.	None.	.....
224	Hotel	7	2	Yes.	8	Gates.
225	Implement factory	2	1	No.	None.	.....
226	Implement and specialty factory ..	2	2	No.	1	Doors.
227	Laundry	2	1	No.	1	h Gates.
228	Laundry	2	1	No.	2	c None.
229	Laundry	2	2	No.	No.	.....
230	Mantle and lamp factory	3	2	a No.	2	Barr.
231	Planing mill	2	1	No.	None.	.....
232	Printing and binding shop	2	3	No.	1	Gates.
233	Printing shop	2	1	No.	No.	.....
234	Structural iron factory	2	1	No.	No.	.....
235	Syrup and maple sugar factory	3	1	a No.	1	j Gates.
236	Tailor shop	1	.....	No.	.....	.....
237	Wire fence factory	2	2	No.	No.	.....

ORDERS AND RECOMMEN

a Equip buildings with fire escapes; b Apply dust blowers on emery wheels
for females; c Put a hand rail around platform above engine and keep elevator
days; h Guard elevator at ground floor; i Guard fly-wheel of engine;

SCOTT

238	Bottling factory	4	6	a None.	None.	.....
239	Broom factory	1	No.	None.	None.	.....
240	Candy factory	3	2	Yes.	1	Gates.
241	Carriage factory	3	1	No.	None.	.....
242	Cigar factory	2	2	No.	None.	.....
243	Cigar factory	4	2	Yes.	1	Gates.
244	Cracker factory	3	7	Yes.	2	Gates.
245	Cracker factory	3	2	Yes.	1	Gates.
246	Flour mill	4	1	Yes.	1	Gates.
247	Gas company	2	1	No.	None.	.....
248	Garment factory	4	1	Yes.	1	Doors.
249	Glucose factory	5	15	a No.	8	Barr.
250	Harness and collar factory	3	1	a No.	1	Gates.
251	Lager beer and malt company	4	10	Yes.	1	Gates.
252	Macaroni factory	4	1	Yes.	1	Gates.
253	Metal wheel factory	3	18	a No.	4	Gates.
254	Newspaper office	2	2	No.	1	Barr.
255	Newspaper office	3	8	Yes.	1	Doors.
256	Paint factory	4	1	Yes.	1	Gates.
257	Paper box factory	2	1	No.	None.	.....
258	Pearl button factory	3	1	a No.	1	Gates.
259	Pearl button factory	2	4	No.	None.	.....
260	Sash and door factory	2	2	No.	1	Barr.
261	Soap factory	2	1	No.	1	Gates.
262	Tin can factory	2	1	No.	No.	.....
263	Wagon and steel car factory	2	2	No.	2	Doors.
264	Washing machine factory	2	1	No.	None.	.....
265	Washing machine factory	2	3	No.	2	Barr.

ORDERS AND RECOMMEN

a Equip buildings with fire escapes as required by law; b Clean closets;
gerous machinery—guard six cutting machines and fly wheel to engine; c Provide
seat in water closets in bone kiln and put a seat in closet on out end of shipping platform;
plant; g Guard main drive belt in engine room; h Provide water closets
machine; j Apply dust blowers on emery wheels.

TABLE No. 1—CONTINUED.
COUNTY.

Ventilation of work-rooms.	Are dust blowers provided.	Water Closets.			Protection of machinery.	Number of accidents since 1900.	Boiler inspections. How often?	Marginal number.
		Description of.	Separate for females.	Condition.				
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	212
Good.	No.	Flush.	Yes.	Good.	Good.	None.	12 months.	213
Good.	b No.	Flush.	No.	Good.	Good.	None.	None.	214
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	215
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	216
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	217
Good.	No.	Flush.	d No.	Good.	Good.	None.	None.	218
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	90 days.	219
Fair.	b No.	Earth.	Yes.	f Filthy.	Good.	None.	12 months.	220
Good.	Yes.	Flush.	No.	Good.	Good.	None.	90 days.	221
Good.	Yes.	Earth.	No.	Good.	Good.	None.	90 days.	222
Good.	No.	Flush.	Yes.	Good.	Good.	None.	12 months.	223
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	224
Good.	b No.	Earth.	No.	f Fair.	Good.	2	60 days.	225
Good.	b No.	Earth.	No.	f Filthy.	Good.	None.	g No.	226
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	15 days.	227
Good.	Yes.	Flush.	Yes.	Good.	Good.	1	15 days.	228
Fair.	Yes.	Earth.	Yes.	f Filthy.	Good.	None.	g No.	229
Good.	b No.	Flush.	d No.	Good.	f Fair.	None.	.....	230
Good.	No.	Earth.	No.	Good.	Good.	None.	None.	231
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	232
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	233
Good.	No.	Earth.	No.	Good.	Good.	None.	30 days.	234
Good.	No.	Flush.	Yes.	Good.	Good.	None.	15 days.	235
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	236
Good.	No.	Earth.	Yes.	Good.	Good.	None.	15 days.	237

NOTES BY INSPECTOR.

and tumbling barrels, c Guard elevator properly; d Provide separate closets
gates in constant use; f Clean closets; g Boiler should be inspected every 90
Keep elevator gates in constant use.

COUNTY.

Good.	No.	Flush.	No.	b Filthy.	Good.	1	60 days.	238
Good.	Yes.	Flush.	d Yes.	Good.	c Fair.	5	60 days.	239
Good.	Yes.	Flush.	Yes.	Good.	Good.	2	60 days.	240
Good.	No.	Earth.	Yes.	Good.	Good.	None.	60 days.	241
Good.	No.	Flush.	Yes.	Good.	Good.	None.	.....	242
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	243
Good.	No.	Flush.	Yes.	Good.	Good.	1	90 days.	244
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	60 days.	245
Good.	Yes.	Flush.	No.	Good.	Good.	None.	90 days.	246
Good.	No.	Flush.	No.	Good.	Good.	None.	6 months.	247
Good.	No.	Flush.	d No.	Good.	Good.	None.	None.	248
Fair.	Yes.	Flush.	No.	e Fair.	f Fair.	68	40 days.	249
Good.	No.	Flush.	No.	Good.	Good.	None.	6 months.	250
Good.	Yes.	Flush.	No.	Good.	Good.	None.	6 months.	251
Good.	No.	Flush.	Yes.	Good.	Good.	1	60 days.	252
Good.	Yes.	Flush.	No.	Good.	Good.	20	60 days.	253
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	254
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	255
Good.	No.	Flush.	Yes.	Good.	g Good.	None.	60 days.	256
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	257
Good.	Yes.	Flush.	Yes.	Good.	Good.	2	60 days.	258
Good.	Yes.	Flush.	Yes.	Good.	Good.	1	60 days.	259
Good.	No.	Flush.	No.	Good.	Good.	8	90 days.	260
Good.	No.	Earth.	No.	Good.	Good.	None.	12 months.	261
Good.	Yes.	Flush.	Yes.	Good.	i Fair.	8	90 days.	262
Good.	No.	Flush.	No.	Good.	Good.	None.	90 days.	263
Good.	No.	Flush.	No.	Good.	Good.	None.	6 months.	264
Good.	j No.	Flush.	Yes.	Good.	Good.	1	6 months.	265

NOTES BY INSPECTOR.

c Discontinue the employment of children under 16 years of age in the operation of dan-
closets for females with separate approaches apart from men's closets; e Repair
Guard main drive belt to oil room engine—guard fan belt on second floor of oil
for men; f Put a guard around bale-former sufficient to hold weight of person off

FACTORY INSPECTION— WAPELLO

Marginal number.	Industry.	Number of stories in factory.	Number of stairways.	Are fire escapes provided?	Elevators.	
					Number of	How guarded.
266	Agricultural implement factory	2	2	No.	None.	
267	Agricultural implement factory	2	2	No.	1	Gates.
268	Agricultural implement jobbers	2	1	No.	1	Bars.
269	Ball-bearing sash roller factory	2	1	No.	None.	
270	Box car loader factory	1	.....	No.	None.	
271	Cigar factory	2	2	No.	1	Bars.
272	Cigar factory	2	2	No.	None.	
273	Cigar factory	2	1	No.	None.	
274	Cigar factory	2	1	No.	1	Bars.
275	Cigar factory	2	1	No.	None.	
276	Cigar factory	2	1	Yes.	1	Bars.
277	Cigar factory	2	2	No.	None.	
278	Candy factory	2	2	No.	2	Gates.
279	Electric power house	1	.....	No.	None.	
280	Hotel	4	4	Yes.	2	Gates.
281	Hotel	2	2	No.	None.	
282	Laundry	2	1	No.	1	Bars.
283	Miners garment factory	2	1	No.	None.	
284	Mining machinery factory	2	2	No.	None.	
285	Mining supplies and tool factory	1	1	No.	None.	
286	Packing house	6	15	Yes.	7	Gates.
287	Pickle factory	2	1	No.	None.	
288	Stamp works	2	1	No.	None.	
289	Steel square factory	2	1	No.	None.	

ORDERS AND RECOMMENDATIONS

a Apply dust blowers on emery wheels and tumbling barrels as required by law; building with fire escapes as required by law; e Provide separate closets for floor in men's water closets; h Equip the two emery wheels with dust blowers that

WOODBURY

290	Bakery	1	2	No.	1	Doors.
291	Bakery	2	1	No.	1	Doors.
292	Bakery	2	4	No.	None.	
293	Brass castings and machinery factory	2	2	No.	1	Gates.
294	Broom factory	2	1	No.	None.	
295	Candy factory	4	2	Yes.	1	Gates.
296	Cereal mill	2	2	Yes.	None.	
297	Cigar factory	2	2	No.	None.	
298	Cigar factory	2	1	No.	None.	
299	Cigar factory	5	1	Yes.	None.	
300	Cigar factory	2	1	No.	None.	
301	Cigar factory	2	2	No.	None.	
302	Cracker factory	2	1	Yes.	2	Gates.
303	Flour mill	4	2	Yes.	None.	
304	Flour mill	2	1	Yes.	None.	
305	Garment factory	4	1	Yes.	1	Doors.
306	Harness factory	2	1	No.	None.	
307	Harness factory	2	1	No.	1	Doors.
308	Hotel	2	2	No.	None.	
309	Hotel	2	2	No.	None.	
310	Hotel	4	2	Yes.	1	Gates.
311	Laundry	2	1	No.	None.	
312	Laundry	1	None.	No.	None.	
313	Linseed oil mill	5	2	Yes.	1	f Gates.
314	Mattress factory	2	2	No.	None.	
315	Mattress factory	2	1	No.	1	Gates.
316	Sash and door factory	2	1	Yes.	1	Bars.
317	Soap factory	2	2	Yes.	1	h No.
318	Vinegar and extract factory	2	1	No.	1	Gates.

ORDERS AND RECOMMENDATIONS

a Provide separate closets for females; b Equip buildings with fire escapes as required by law; c Provide separate closets for floor in men's water closets; d Clean and repair water closets; e Boilers should be inspected water closet; f Guard elevator properly; g Provide sufficient water closets for

TABLE No. 1—CONTINUED.

COUNTY.

Ventilation of work-rooms.	Are dust blowers provided.	Water Closets.			Protection of machinery.	Number of accidents since 1900.	Boiler inspections How often?	Marginal number.
		Description of.	Separate for females.	Condition.				
Good.	a No.	Flush.	Yes.	Good.	Good.	2	80 days.	286
Good.	a No.	Flush.	Yes.	Good.	Good.	1	80 days.	287
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	288
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	289
Good.	a No.	Earth.	No.	b Filthy.	Good.	None.	90 days.	270
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	271
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	272
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	273
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	274
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	275
Good.	No.	Flush.	c Yes.	d Good.	Good.	None.	None.	276
Good.	No.	Flush.	c Yes.	Good.	Good.	None.	None.	277
Good.	Yes.	Flush.	e No.	Good.	Good.	None.	90 days.	278
Good.	No.	Flush.	No.	Good.	Good.	None.	90 days.	279
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	280
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	281
Good.	Yes.	Flush.	Yes.	Good.	f Good.	None.	15 days.	282
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	283
Good.	a No.	Flush.	Yes.	b g Bad.	Good.	None.	15 days.	284
Good.	h Yes.	Earth.	Yes.	Fair.	Good.	1	90 days.	285
Good.	Yes.	Flush.	Yes.	i Good.	Good.	8	90 days.	286
Good.	No.	Earth.	e No.	Good.	Good.	None.	None.	287
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	288
Good.	Yes.	Flush.	Yes.	Good.	f Fair.	None.	90 days.	289

NOTATIONS BY INSPECTOR.

b Clean closets; c Put up a screen to women's water closets; d Equip females; f Remove long set screw from line shaft; g Repair seats and are not now protected; i Put a trap in water closet north of buildings A and B.

COUNTY.

Good.	Yes.	Flush.	a No.	Good.	Good.	None.	None.	290
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	291
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	292
Good.	c No.	Flush.	No.	d Bad.	Good.	None.	None.	293
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	294
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	295
Good.	Yes.	Flush.	Yes.	Good.	Good.	None.	90 days.	296
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	297
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	298
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	299
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	300
Good.	No.	Earth.	No.	Good.	Good.	None.	None.	301
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	302
Good.	Yes.	Flush.	Yes.	Good.	Good.	1	60 days.	303
Good.	No.	Earth.	No.	Good.	Good.	None.	10 days.	304
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	305
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	306
Good.	No.	Flush.	No.	Good.	Good.	None.	None.	307
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	308
Good.	No.	Flush.	Yes.	Good.	Good.	None.	12 months	309
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days	310
Good.	No.	Flush.	a No.	Good.	Good.	None.	e No.	311
Good.	No.	Flush.	Yes.	Good.	Good.	None.	None.	312
Good.	No.	Flush.	Yes.	Good.	Good.	None.	90 days.	313
Good.	No.	Earth.	Yes.	Good.	Good.	None.	None.	314
Good.	No.	Earth.	a No.	d Bad.	Good.	None.	None.	315
Good.	Yes.	Flush.	No.	Good.	Good.	8	90 days.	316
Good.	No.	Earth.	g Yes.	d Bad.	Good.	None.	90 days.	317
Good.	No.	Earth.	i None.	Good.	Good.	None.	90 days.	318

NOTATIONS BY INSPECTOR.

required by law; c Apply dust blowers on emery wheels, polishing wheels and once in ninety days; f Guard elevator at first floor; g Provide screen for women's employes as required by law.

FACTORY INSPECTION—TABLE No. 2.

ORDERS AND RECOMMENDATIONS TO EMPLOYERS.

Record of recommendations made by the commissioner to firms, corporations and employers of five or more persons in the state, covered by section 2472, which provides for the examination into the methods of protection afforded employes from danger, and the sanitary conditions in and around buildings and places where labor is employed or other persons are assembled.

Recommendations complied with, marked C. W.

Recommendations partially complied with, marked ..P. C. W.

Recommendations disregarded, marked R. D.

APPANOOSE COUNTY.

Marginal number.	Recommendations Made.	Condition.
1	Fly wheel to engine must be supplied with guard rail	R. D.
2	Closets used by shop men should be cleaned at once	R. D.
3	Provide separate closets for females	R. D.

BENTON COUNTY.

4	Equip buildings with fire escapes	C. W.
5	Provide separate water closets for females	C. W.

BLACK HAWK COUNTY.

6	Provide separate water closets for females, and hand rail on stairway to lard cellar	C. W.
7	Repair gates guarding elevator and keep them in constant use	C. W.
8	Apply dust blowers on emery wheels	C. W.
9	Apply dust blowers on emery wheels	C. W.
10	Provide separate water closets for females	C. W.
11	Equip hotel with fire escapes	C. W.
12	Equip building with fire escape	P. C. W.
13	Provide separate water closets for females	C. W.
14	Provide separate water closets with separate approaches and screens for females	R. D.
15	Equip buildings with fire escapes	R. D.
16	Equip buildings with fire escapes	R. D.
17	Provide separate water closets for females, and equip building with fire escape	R. D.
18	Provide separate water closets for females	R. D.
19	Provide separate water closets for females	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

BOONE COUNTY.

Marginal number.	Recommendations Made.	Condition.
20	Equip buildings with fire escapes.....	C. W.
21	Equip hotel with fire escapes.....	C. W.
22	Equip hotel with fire escapes.....	C. W.
23	Equip buildings with fire escapes, and provide separate water closets for females.....	R. D.
24	Provide separate water closets for females.....	R. D.
25	Provide separate water closets for females.....	R. D.
26	Provide separate water closets for females.....	R. D.

BUCHANAN COUNTY.

27	Provide separate water closets for females.....	R. D.
28	Equip buildings with fire escapes.....	R. D.

CASS COUNTY.

29	Provide separate water closets for females and equip buildings with fire escapes.....	R. D.
30	Provide separate water closets for females.....	R. D.

CERRO GORDO COUNTY.

31	Provide separate water closets for females.....	C. W.
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CHEROKEE COUNTY.

32	Equip buildings with fire escapes.....	R. D.
33	Provide separate water closets for females.....	R. D.

CLINTON COUNTY.

34	Provide separate closets for females.....	C. W.
35	Clean water closets.....	C. W.
36	Comply with law regarding the employment of children operating machinery.....	C. W.
37	Equip stairways with hand rails; guard all elevator openings; guard main belt pulleys to surfacer and equip buildings with fire escapes.....	C. W.
38	Apply dust blowers on emery wheels and all dust producing machinery.....	R. D.
39	Equip building with fire escapes.....	R. D.
40	Equip building with fire escapes.....	R. D.
41	Equip building with fire escapes.....	R. D.
42	Equip building with fire escapes.....	R. D.
43	Equip building with fire escapes.....	R. D.
44	Equip building with fire escapes.....	R. D.
45	Clean and repair water closets and keep in sanitary condition.....	R. D.
46	Guard fly wheel, main gear and main rod to engine.....	R. D.
47	Provide separate closets for females.....	R. D.
48	Equip buildings with fire escapes and clean water closets.....	R. D.
49	Apply dust blowers on emery wheels and all dust producing machinery.....	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

DES MOINES COUNTY.

Marginal number.	Recommendations Made.	Condition.
50	Put hand rails on outside stairway and box counter shaft on second floor of mill	C. W.
51	Comply with law in regard to fire escapes and repair blower pipes so as to confine dust in grinding room and repair closet for the use of cutting plant	C. W.
52	Equip building with fire escapes and provide separate water closet for females	C. W.
53	Equip buildings with fire escapes	C. W.
54	Equip buildings with fire escapes	C. W.
55	Guard elevator properly and clean men's water closet	C. W.
56	Provide separate water closets for females and keep elevator gates in constant use	C. W.
57	Equip building with fire escapes	R. D.
58	Equip building with fire escapes	R. D.
59	Equip building with fire escapes	R. D.
60	Equip building with fire escapes	R. D.
61	Equip building with fire escapes	R. D.
62	Equip buildings with fire escapes	R. D.
63	Equip buildings with fire escapes	R. D.
64	Equip hotel with fire escapes	R. D.
65	Equip hotel with fire escapes	R. D.
66	Equip buildings with fire escapes and provide separate water closets for females	R. D.
68	Provide separate water closets for females and equip buildings with fire escapes	R. D.
69	Guard elevator properly and apply dust blowers on emery wheels, tumbling barrels and all dust producing machinery	R. D.
70	Guard elevators properly	R. D.
71	Clean water closets; put hand rails on stairways; box counter shaft on cross-cut circular saws and shaper and scroll saw, and provide separate water closets for females	R. D.
72	Equip buildings with fire escapes; clean water closets and put hand rail on stairway in work room	R. D.
73	Guard elevators with gates or doors and keep same in constant use; equip buildings with fire escapes	R. D.
74	Provide separate closets for females with separate approaches and properly secured	R. D.
75	Equip building with fire escapes	R. D.
76	Equip buildings with fire escapes	R. D.

DUBUQUE COUNTY.

77	Provide separate water closets for females and equip building with fire escapes	C. W.
78	Guard elevator near cupola properly and apply dust blowers on emery wheels and tumbling barrels	C. W.
79	Provide separate water closets for females and equip buildings with fire escapes	C. W.
80	Equip buildings with fire escapes	C. W.
81	Equip buildings with fire escapes	C. W.
82	Provide separate water closets for females and equip buildings with fire escapes	C. W.
83	Equip buildings with fire escapes and provide separate water closets for females	R. D.
84	Equip building with fire escapes	C. W.
85	Equip building with fire escapes, provide separate closets for females and clean water closets now in use	P. C. W.
86	Equip buildings with fire escapes	C. W.
87	Equip buildings with fire escapes	R. D.
88	Provide separate water closets for females	R. D.
89	Equip building with fire escapes	R. D.
90	Equip building with fire escapes	R. D.
91	Provide separate water closets for females and equip buildings with fire escapes	R. D.
92	Equip buildings with fire escapes	R. D.
93	Equip buildings with fire escapes	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

DUBUQUE COUNTY—CONTINUED.

Marginal number.	Recommendations Made.	Condition.
94	Equip buildings with fire escapes	R. D.
95	Equip buildings with fire escapes	R. D.
96	Equip buildings with fire escapes	R. D.
97	Equip building with fire escapes	R. D.
98	Equip building with fire escapes	R. D.
99	Keep urinal for men in a clean condition and equip building with fire escapes	R. D.
100	Clean and repair closet for men on second floor and equip building with fire escapes	R. D.
101	Provide separate closets for females, clean men's earth closet and equip buildings with fire escapes	R. D.
102	Equip buildings with fire escapes	R. D.
103	Equip building with fire escapes	R. D.
104	Clean closets and keep them in good sanitary condition	R. D.
105	Apply dust blowers on all dust producing machinery	R. D.
106	Equip building with fire escapes	R. D.
107	Equip building with fire escapes	R. D.
108	Equip building with fire escapes	C. W.
109	Equip building with fire escapes	R. D.
110	Equip buildings with fire escapes	R. D.
111	Equip building with fire escapes	R. D.
112	Equip building with fire escapes	R. D.
113	Equip building with fire escapes	R. D.

EMMETT COUNTY.

114	Equip hotel with fire escape	R. D.
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FAYETTE COUNTY.

115	Equip building with fire escapes	R. D.
116	Provide separate water closets for females	R. D.

FLOYD COUNTY.

117	Provide separate water closets for females	R. D.
118	Provide separate water closets for females	R. D.

HAMILTON COUNTY.

119	Provide separate water closets for females	R. D.
120	Provide separate water closets for females	R. D.
121	Equip buildings with fire escapes	R. D.
122	Equip building with fire escapes	R. D.

HANCOCK COUNTY.

123	Equip hotel with fire escapes	C. W.
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HARDIN COUNTY.

124	Provide separate water closets for females	C. W.
125	Equip buildings with fire escapes and provide separate water closets for females	C. W.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

HARRISON COUNTY.

Marginal number.	Recommendations Made.	Conditions.
126	Provide separate water closets for females	C. W.

HENRY COUNTY.

127	Equip buildings with fire escapes	R. D.
128	Provide separate water closets for females	R. D.

HOWARD COUNTY.

129	Provide separate water closets for females	C. W.
130	Equip hotel with fire escapes	R. D.

JACKSON COUNTY.

131	Equip buildings with fire escapes	R. D.
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JASPER COUNTY.

132	Provide dust blowers on all dust producing machinery	C. W.
133	Equip buildings with fire escapes	R. D.

JEFFERSON COUNTY.

134	Equip buildings with fire escapes	R. D.
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JOHNSON COUNTY.

135	Provide separate water closets for females	C. W.
136	Provide separate water closets for females	R. D.
137	Equip buildings with fire escapes and provide separate water closets for females	R. D.
138	Provide separate water closets for females and equip buildings with fire escapes	R. D.
139	Equip buildings with fire escapes and provide separate water closets for females	R. D.

KOSSUTH COUNTY.

140	Equip hotel with fire escapes	R. D.
141	Provide separate water closets for females	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

LEE COUNTY.

Marginal number.	Recommendations Made.	Conditions.
142	Provide separate water closets for females.	C. W.
143	Guard set screws on line shaft in shop; clean closets; put dust blowers on emery wheels; guard elevators properly; keep gates in constant use and equip buildings with fire escapes.	C. W.
144	Provide separate water closets for females.	C. W.
145	Equip buildings with fire escapes.	C. W.
146	Equip buildings with fire escapes.	C. W.
147	Equip buildings with fire escapes.	C. W.
148	Guard set screws on line shaft in basement and keep elevator gates in constant use.	C. W.
149	Provide dust blowers on emery wheels; guard circular saw in car shop, and clean closets.	C. W.
150	Equip building with fire escapes.	C. W.
151	Equip building with fire escapes.	R. D.
152	Equip building with fire escapes.	R. D.
153	Equip building with fire escapes.	R. D.
154	Equip building with fire escape and provide separate water closets for females.	R. D.
155	Guard elevator properly and equip building with fire escapes.	R. D.
156	Equip factory with fire escapes.	R. D.
157	Equip building with fire escapes.	R. D.
158	Provide separate water closets for females.	R. D.
159	Provide separate water closets for females.	R. D.
160	Equip building with fire escapes.	R. D.
161	Equip hotel with fire escapes.	R. D.
162	Equip building with fire escapes.	R. D.
163	Equip hotel with fire escapes.	R. D.
164	Equip building with fire escapes.	R. D.
165	Equip building with fire escapes.	R. D.
166	Provide separate water closets for females.	R. D.

LINN COUNTY.

167	Put a guard around ten-inch belt on tumbler machine; guard belts on ten- nant machine and gainer; clean closets; apply dust blowers on emery wheels and provide proper heat and ventilation for blacksmith shop.	C. W.
168	Provide separate water closets for females.	C. W.
169	Provide dust blowers on emery wheels and also on all polishing wheels.	C. W.
170	Keep elevator gates in constant use; clean and disinfect water closet in basement.	C. W.
171	Equip building with fire escapes.	C. W.
172	Put a guard rail around belt on top floor of elevator B; protect set screw on line shaft; put a guard rail along connecting rod of engine, and put a guard around feed grinders.	C. W.
173	Put a guard around main drive belt in basement, and provide separate water closets for females.	C. W.
174	Provide water closets for men; remove or protect set screw on line shaft, and guard main drive belt.	C. W.
175	Apply dust blowers on emery wheels and clean water closets.	C. W.
176	Equip building with fire escapes and provide a new flush tank for water closet.	C. W.
176	Remove or protect set screw on shaft in lard room; cover square belt in same locality; put a roof on urinal on shipping platform, and equip buildings with fire escapes.	P. C. W.
177	Clean and disinfect water closets.	C. W.
178	Urinals on second floor are unsanitary and should be cleaned and repaired at once, and equip hotel with fire escapes.	C. W.
179	Provide dust blowers on emery wheels and emery belts.	C. W.
180	Equip buildings with fire escapes.	R. D.
181	Equip buildings with fire escapes.	R. D.

MAHASKA COUNTY.

182	Equip hotel with fire escapes.	R. D.
183	Equip hotel with fire escapes.	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

MARION COUNTY.

Marginal number.	Recommendations Made.	Conditions.
184	Provide dust blowers on emery wheels	R. D.
185	Equip college building with fire escapes	R. D.

MARSHALL COUNTY.

186	Provide separate water closets for females	C. W.
187	Provide separate water closets for females	C. W.
188	Provide separate water closets for females	C. W.
189	Provide separate water closets for females	C. W.
190	Equip building with fire escapes	C. W.
191	Guard fly wheel of engine; repair and use water pipe on emery wheel; put railing around hanging scaffold; clean out sewer that runs from shop and connect up urinal to same; put dust blowers on emery wheels; guard circular saw in car shop; clean earth closets and repair so as to protect occupants	C. W.
192	Provide separate water closets for females and equip buildings with fire escapes	C. W.
193	Clean and disinfect closets	C. W.
194	Provide separate water closets for females and equip buildings with fire escapes	C. W.
195	Clean earth closets and equip buildings with fire escapes	C. W.
196	Provide separate water closets for females	R. D.
197	Keep elevator gates in constant use	C. W.
198	Provide sufficient water closets for employees	C. W.
199	Provide separate water closets for females; guard mangie gear and provide a flush tank for closets now in use	R. D.
200	Apply dust blowers on emery wheels; clean closets, and put guard gear on bend roller	R. D.
201	Apply dust blowers on emery wheels	R. D.
202	Apply dust blowers on emery wheels; guard bevel gear on iron saw in shop; clean earth closets, and apply dust blower to tumbling barrel	R. D.
203	Provide separate water closets for females	R. D.

MONROE COUNTY.

204	Equip hotel with fire escapes	R. D.
205	Equip building with fire escapes	R. D.
206	Equip building with fire escapes	R. D.

MONTGOMERY COUNTY

207	Equip building with fire escapes	C. W.
208	Equip building with fire escapes	R. D.

MUSCATINE COUNTY.

209	Apply dust blowers on emery wheels and tumbling barrels	C. W.
210	Allow no one to clean machinery while in motion; keep floors dry and clean in cutting room and repair same; clean men's water closets	C. W.
211	Clean men's earth closets	C. W.
212	Clean and repair men's closets	C. W.
213	Box pulleys on jack shaft on floor of cutting room; guard elevator shaft properly; clean earth closets and equip factory with fire escapes	C. W.
214	Guard all openings in elevator shaft and equip building with fire escapes	C. W.
215	Equip building with fire escapes	R. D.
216	Apply dust blowers on emery wheels	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

MUSCATINE COUNTY—CONTINUED.

Marginal number.	Recommendations Made.	Conditions.
217	Equip buildings with fire escapes and provide separate water closets for females	P. C. W.
218	Equip building with fire escapes	R. D.
219	Equip building with fire escapes and provide dust blowers on emery wheels	P. C. W.
220	Equip building with fire escapes	R. D.
221	Equip building with fire escapes	R. D.
222	Equip building with fire escapes	R. D.
223	Equip building with fire escapes	R. D.
224	Clean and disinfect water closets for men and provide sewer connections and lay new floor in basement	C. W.

O'BRIEN COUNTY.

225	Provide separate water closets for females	R. D.
226	Equip building with fire escapes	R. D.

PAGE COUNTY.

227	Provide separate water closets for females	R. D.
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PLYMOUTH COUNTY.

228	Provide separate water closets for females	C. W.
229	Equip building with fire escapes	R. D.

POLK COUNTY.

230	Clean and disinfect water closets and remove locks to prevent egress to employes in case of fire	C. W.
231	Provide separate water closets for females	C. W.
232	Equip building with fire escapes	C. W.
233	Provide separate water closets for females	C. W.
234	Equip building with fire escapes	R. D.
235	Equip building with fire escapes	R. D.
236	Equip building with fire escapes	R. D.
237	Equip building with fire escapes	R. D.
238	Apply dust blowers on all dust producing machinery	R. D.
239	Equip building with fire escapes	R. D.
240	Provide separate water closets for females and equip buildings with fire escapes	R. D.
241	Clean and disinfect water closets and equip buildings with fire escapes	R. D.
242	Provide separate water closets for females	R. D.
243	Provide separate closets for females	R. D.
244	Provide separate water closets for females	R. D.
245	Equip buildings with fire escapes	R. D.
246	Equip buildings with fire escapes	R. D.
247	Equip building with fire escapes	R. D.
248	Equip building with fire escapes	R. D.
249	Equip buildings with fire escapes	R. D.
250	Equip buildings with fire escapes	R. D.
251	Equip buildings with fire escapes	R. D.
252	Equip buildings with fire escapes	R. D.
253	Equip buildings with fire escapes	R. D.
254	Equip buildings with fire escapes	R. D.
255	Equip buildings with fire escapes	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

POTTAWATAMIE COUNTY.

Marginal number.	Recommendations Made.	Conditions.
256	Equip buildings with fire escapes.....	C. W.
257	Guard elevator at ground floor.....	C. W.
258	Equip building with fire escapes.....	R. D.
259	Equip building with fire escapes.....	R. D.
260	Clean and disinfect men's water closets and first floor is unsanitary and should be repaired.....	R. D.
261	Apply dust blowers on emery wheels and tumbling barrels; clean and disinfect closets and provide some protection against fire in boiler room..	R. D.
262	Provide separate water closets for females.....	R. D.
263	Provide separate water closets for females.....	R. D.
264	Apply dust blowers on emery wheels; provide separate water closets for females and guard fly wheel on engine.....	R. D.
265	Equip building with fire escapes; put a hand rail around platform above engine and keep elevator gates in constant use.....	R. D.
266	Equip building with fire escapes and keep elevator gates in constant use..	R. D.
267	Provide separate water closets for females; equip building with fire escapes and guard elevator properly.....	R. D.
268	Apply dust blowers on emery wheels.....	R. D.
269	Remove set screw on line shaft and apply dust blowers on emery wheels and tumbling barrels.....	R. D.
270	Clean and disinfect men's water closet and apply dust blowers on emery wheels.....	R. D.
271	Guard elevator in shipping room.....	R. D.

SCOTT COUNTY.

272	Provide separate water closets for females.....	C. W.
273	Provide separate water closets for females.....	C. W.
274	Provide separate water closets for females.....	C. W.
275	Guard bale-former properly.....	C. W.
276	Provide separate water closets for females.....	C. W.
277	Equip buildings with fire escapes.....	R. D.
278	Equip building with fire escapes.....	R. D.
279	Equip building with fire escapes.....	R. D.
280	Equip building with fire escapes.....	R. D.
281	Equip building with fire escapes.....	R. D.
282	Equip building with fire escapes.....	R. D.
283	Equip building with fire escapes.....	R. D.
284	Equip building with fire escapes.....	R. D.
285	Equip building with fire escapes.....	R. D.
286	Equip building with fire escapes.....	R. D.
287	Equip building with fire escapes.....	R. D.
288	Equip building with fire escapes.....	R. D.
289	Provide separate water closets for females and equip building with fire escapes.....	R. D.
290	Provide separate water closets for females and equip buildings with fire escapes.....	R. D.
291	Remove or protect set screw on main shaft in shop.....	R. D.
292	Guard main drive belt in engine room.....	R. D.
293	Discontinue the employment of children under sixteen years of age in the operation of cutting machines; guard fly wheel on engine; guard knives on six cutting machines; provide separate water closet and proper screens for same for female employees.....	R. D.
294	Clean and disinfect water closets in basement and equip building with fire escapes.....	R. D.
295	Guard main drive belt on second floor and equip building with fire escapes.....	R. D.
296	Guard main belt to oil room engine; guard main belt on second floor of oil plant; repair seat in water closet in bone kiln; put stool in closet on out end of shipping platform, and equip plant with fire escapes.....	R. D.
296	Provide separate water closets for females.....	R. D.
297	Provide dust blowers on emery wheels.....	R. D.
298	Apply dust blowers on emery wheels.....	C. W.
299	Apply dust blowers on emery wheels.....	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

UNION COUNTY.

Marginal number.	Recommendations Made.	Conditions.
300	Provide separate water closets for females	C. W.

VAN BUREN COUNTY.

301	Equip building with fire escapes	R. D.
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WAPELLO COUNTY.

302	Remove or protect set screw on main shaft and protect main drive belt to dynamos	C. W.
303	Provide separate water closets for females	C. W.
304	Repair dust blowers on emery and polishing wheels and keep same in constant use	C. W.
305	Provide separate water closets for females	C. W.
306	Provide separate water closets for females	C. W.
307	Place a trap in water closets north of buildings A and B to exclude steam and sewer gas	C. W.
308	Apply dust blowers on emery wheels	C. W.
309	Equip elevator shaft with gates, and remove or protect all protruding set-screws on line shaft	C. W.
310	Provide separate water closets for females	C. W.
311	Apply dust blowers on tumbling barrels and emery wheels	C. W.
312	Equip building with fire escapes	R. D.
313	Equip building with fire escapes	R. D.
314	Equip building with fire escapes	R. D.
315	Equip building with fire escapes	R. D.
316	Equip building with fire escapes	R. D.
317	Provide separate water closets for females and equip buildings with fire escapes	R. D.
318	Provide proper screen for water closets used by female employees and equip building with fire escapes	R. D.
319	Remove or protect set-screws on main shaft	R. D.
320	Apply dust blowers on emery wheels	C. W.
321	Provide separate water closets for females	R. D.

WASHINGTON COUNTY.

322	Equip hotel with fire escapes	R. D.
323	Equip building with fire escapes and provide separate water closets for females	R. D.

WEBSTER COUNTY.

324	Equip building with fire escapes and provide separate water closets for females	P. C. W.
325	Equip building with fire escapes	R. D.
326	Provide separate water closets for females	R. D.
327	Provide separate water closets for females and equip building with fire escapes	R. D.
328	Equip building with fire escapes	R. D.

WINNESHIEK COUNTY.

329	Provide separate water closets for females	C. W.
330	Provide separate water closets for females	R. D.

FACTORY INSPECTION—TABLE No. 2—CONTINUED.

WOODBURY COUNTY.

Marginal number.	Recommendations Made.	Conditions.
881	Guard elevators at first floor.....	C. W.
882	Provide separate water closets for females.....	C. W.
883	Equip building with fire escapes.....	C. W.
884	Provide separate water closets for females.....	C. W.
885	Provide separate water closets for females.....	C. W.
886	Equip building with fire escapes.....	C. W.
887	Provide separate water closets for females.....	C. W.
888	Guard elevators properly, clean and disinfect water closets, and provide screens for those used by females.....	R. D.
889	Provide separate water closets for females.....	R. D.
840	Provide separate water closets for females.....	R. D.
841	Provide separate water closets for females.....	R. D.
842	Provide separate water closets for females.....	R. D.
843	Provide separate water closets for females.....	R. D.
844	Equip building with fire escapes, apply dust blowers on emery and polishing wheels, and repair water closets.....	R. D.
845	Provide separate water closets for females.....	R. D.
846	Provide separate water closets for females and clean out and disinfect those now in use.....	R. D.

WRIGHT COUNTY,

847	Equip hotel with fire escapes.....	R. D.
848	Equip hotel with fire escapes.....	R. D.

FACTORY INSPECTION—FATAL ACCIDENTS—PART III.

The following fatal accidents occurred in Iowa during the period from December 31, 1900, to October 1, 1903:

BLACK HAWK COUNTY.

Three persons killed on street railway. No details reported.

One man killed on circular saw in feeder and stacker factory.

One man killed by board that was thrown from a circular saw in sash and door factory.

BOONE COUNTY.

One girl caught in an extractor in laundry; arm torn off and killed.

CERRO GORDO COUNTY.

Two men killed by fall of clay bank in brickyard.

One man fell off elevator and killed.

DALLAS COUNTY.

One man killed by live wire; employed by electric light company.

DES MOINES COUNTY.

Man caught in fly wheel of engine and killed in machine shop.

One boy fifteen years old had hair caught in belt and killed in button factory.

Man fell off boiler in desk factory causing injury from which he died.

DUBUQUE COUNTY.

Man killed in sawmill. No details reported.

One man fell off roof and killed while employed putting on new roof.

One man killed by an explosion of dynamite in lime works.

EMMET COUNTY.

One man caught in gearing of brick machine in brickyard; killed.

FAYETTE COUNTY.

Miller had clothing caught in machinery of mill and arm torn off and instantly killed.

In railroad shops while hoisting machinery some part of hoist gave way and machine fell on man, instantly killing him.

LEE COUNTY.

One man killed by boiler explosion in service of street railway company.
Two men killed by powder explosion in gunpowder factory.

LINN COUNTY.

One man killed by live wire in employ of waterworks company.
Man thrown against a saw in power sawing machine and killed; skull crushed.

MAHASKA COUNTY.

Man had clothing caught on shaft and hurled against ceiling and instantly killed.

MUSCATINE COUNTY.

Night watchman in sash and door factory scalded to death by steam from boiler.

POLK COUNTY.

One boy fifteen years old caught on a revolving shaft and killed in packing house.

One man killed in linseed oil mill. No details reported.

Man killed by an explosion of dynamite in a sewer employed by contractor on city sewer.

SCOTT COUNTY.

Five men killed by boiler explosion in glucose factory.

One man killed by overheating in glucose factory.

Man fell off scaffold on building and killed, employed by contractor.

One lineman fell from pole and was killed; employed by electric light company.

Machinist caught on shaft and instantly killed in can factory.

VAN BUREN COUNTY.

Two men were instantly killed by the explosion of a boiler in a grist mill.

WEBSTER COUNTY.

One lineman fell off electric light pole and was killed.

FACTORY INSPECTION—NON-FATAL ACCIDENTS—
PART III.

BLACK HAWK COUNTY.

One girl had finger badly cut in canning factory.
Man had finger mashed and hand cut in broom factory.
Man had three fingers cut off by circular saw in grinder factory.
Man lost one eye in an explosion in gas and electric company's plant.
Boy caught on shaft; had arm broken in harness factory.
Man had two fingers cut off right hand in harness factory.
Man sprained ankle by stepping on rolling pipe in gate factory.
One man injured on jointer in feeder and stacker factory.
Girl had two fingers mashed in rollers of machine in laundry.
Four employees injured in machine shop. No details reported.
Twenty-four persons injured on street railway during a two-year period.
No details reported.

BOONE COUNTY.

One girl had hand mashed in mangle in laundry.
One man had leg broken in brickyard and one man had finger amputated in brickyard.

BREMER COUNTY.

Man lost two fingers in planing mill.

BUCHANAN COUNTY.

Man lost end of two fingers in rolling mill.

BUENA VISTA COUNTY.

Three men injured in machines in butter tub factory. No details reported.

CASS COUNTY.

Three men had fingers injured in machines in sash and door factory.
No details reported.

Three men had hands injured in canning factory. No details reported.

CERRO GORDO COUNTY.

Girl got fingers mashed in mangle in steam laundry.
Ten employees injured in the erection of buildings by a contracting firm.
No details reported.

One employe hurt by fall of clay in pit in brickyard.

Three men injured by buzz-saw in foundry and machine shop. No details reported.

CLARKE COUNTY.

Two men injured by contact with unguarded fly-wheel. No details reported.

CLAY COUNTY.

One man had shoulder pulled out of joint in hay press factory.

CLAYTON COUNTY.

Ten men injured in various ways in sawmill. No details reported.

CLINTON COUNTY.

Man had finger cut off in machine in bed spring factory.

Man lost an eye by being struck by piece of iron flying from machine in bed spring factory.

Man had hand cut off by circular saw in bed spring factory.

Man had end of finger cut off in furniture factory.

Two men lost ends of fingers in machines in lock factory.

Man injured by oil explosion in gas and coke plant.

Thirty-three reported injured by slight cuts and bruises in sash and door factory. No details reported.

One man had eye injured in machine shop.

Ten employes injured in box factory. No details reported.

Three employes hurt by fall of timber in boat builders' shop. No details reported.

Twenty-three employes injured in saw mill during two-year period. No details reported.

Three employes received slight cuts in wagon factory.

DALLAS COUNTY.

Man caught in machine in a mill and had knee thrown out of joint.

DES MOINES COUNTY.

Boy had arm scalded in tank of boiling water.

One man lost one finger on machine in boiler shop.

Two men had fingers cut off on machines in furniture factory.

One employee injured in elevator in harness and collar factory.

One employe injured by truck load of goods falling on him, in wholesale grocery.

One employe had hand cut and one had eye injured in wagon factory.

Man had right thumb crushed in machine, causing the loss of same by amputation.

DUBUQUE COUNTY.

One man injured in altar factory. No details reported.

Man had foot injured in harness factory. No details reported.

Twelve employes injured by cuts, bruises, etc., in brewery. None serious.

One man had big toe cut off from one foot by sheet of steel plate falling on it, in boiler shop.

One man had fingers on one hand badly mangled in pump and plumbing supply factory.

One man caught in machine in pump factory. Right arm badly mangled permanently impairing its use.

Man lost end of index finger right hand in machine in shoe factory.

Thirteen employes slightly cut and bruised in planing mill. No details reported.

One man's arm crushed in lumber mill.

Two men had fingers cut in furniture factory. No details reported.

One man injured in elevator in cracker factory.

One man lost finger in electrical works.

EMMET COUNTY.

One man fell and broke two fingers; employed by electric light company.

FAYETTE COUNTY.

Man had hand crushed in press in printing office.

Girl had finger crushed in mangle in laundry.

FLOYD COUNTY.

Three men had fingers cut off in furniture factory.

One man had ends of two fingers cut off by saw in furniture factory.

GRUNDY COUNTY.

Young girl aged fourteen had hair caught in cream separator which was running rapidly and had scalp torn off.

Boy seriously injured by the explosion of an acetylene gas plant in a hardware store.

HAMILTON COUNTY.

Man lost hand in machine in farm implement factory.

Boy lost end of finger in type setting machine in printing office.

Employee had finger mashed and amputated in felt shoe factory.

One employee had hand crushed in dough roller in bakery.

Two employes had fingers mashed in sieve factory. No details.

Man injured by an explosion of some part of a gasoline engine and both eyes nearly put out.

HANCOCK COUNTY.

Two men had bones broken in tile yard. No details reported.

HARDIN COUNTY.

One man injured in tile yard. No details reported.

One man injured by the operation of an elevator in brick and tile yard.

HENRY COUNTY.

Loaded elevator in an implement house broke and fell with man, one story. One arm badly fractured and crushed at the wrist and other internal injuries.

One man had hand cut in sash and door factory.

HOWARD COUNTY.

Man had hand crushed in tow picking machine in tow mill.

One man lost an arm caught in tow picking machine in tow mill.

HUMBOLDT COUNTY.

Two employes injured in laundry; fingers mashed and burned.

IOWA COUNTY.

One man had knee put out of joint by wheel barrow falling upon it in brickyard.

JASPER COUNTY.

One man had finger cut off by circular saw in stacker factory.

JEFFERSON COUNTY.

One man had finger cut off oiling engine in printing office.

Man injured by a casting falling on his head cutting it severely. Cause, defective hoist.

JOHNSON COUNTY.

Girl injured by having hand caught in machine in laundry.

Two men had fingers cut in box saw in chemical factory.

One employe had face injured in iron works. No details reported.

JONES COUNTY.

One man injured by fall while employed by electric light company.

Two men hurt by falling in stone quarry.

LEE COUNTY.

Two men lost fingers on machines. One man lost two fingers on circular saw in planing mill.

One man lost four fingers on a circular saw in carriage and wagon factory.

Two men injured by circular saw. One man injured by a fall. One man injured by fly wheel in saw mill. No details reported.

Three employes injured in electrical supply factory. No details reported.

One man slightly injured in printing office.

One man's hand hurt in printing office.

One man run over by wagon; toe mashed in planing mill.

One man had fingers cut off one hand in plow and harrow factory.
Six employes had fingers mashed in shoe factory.
Man struck by street car knocked down and dragged some distance;
head badly cut; not seriously injured.
Man fell off roof of sawmill and broke one rib.

*FT. MADISON PENITENTIARY.

Eight men had hands lacerated and bruised in button factory.
One man had finger fractured in button factory.
Seventeen men had lacerated wounds in hands and fingers in chair
factory.
Six men injured by bruises in chair factory.
One had arm crushed and one had foot crushed in chair factory.
Thirty-three men injured in tool factory by various wounds and
bruises.
Three men injured. One had hand crushed and two had hands bruised.

LINN COUNTY.

One man lost three fingers and one man lost one foot in cereal mill. No
details reported.
Two men injured in machine in cracker factory. No details reported.
One man injured by cake of ice falling on him; one cut with cleaver;
one fell off car in packing house.
Nine men injured by the loss of fingers in sash and door factory. No
details reported.

MAHASKA COUNTY.

One man's hand injured, one man's face injured, in sash and door fac-
tory.
One man injured throwing off belt in machine shop.

MARION COUNTY.

One man injured by kettle exploding in canning factory.
Two men lost fingers in jointing machine in wagon factory.
One man had arm broken while employed in stacker factory.

MARSHALL COUNTY.

One man seriously injured by piece of timber flying from circular saw
and striking him in abdomen while employed in machine shop.
One man lost an eye by being struck by a flying chip of steel and one
man injured by machine in machine shop.

MILLS COUNTY.

Man caught on set screw on a shaft in cold storage plant and whirled
around shaft until he was badly injured.

*Taken from second biennial report, Board of Control from January 1, 1901, to June
30, 1901.

MONROE COUNTY.

One man injured by a fall employed by electric light company.

MONTGOMERY COUNTY.

Three men had hands pinched in press in printing office. No details reported.

MUSCATINE COUNTY.

One man caught on shaft; arm broken in two places in button factory.

Girl had thumb and two fingers cut off in machine in button factory.

Three employes lost fingers and one had eyes injured by flying splinter from circular saw, while employed in sash and door factory.

Twenty-two employes injured by saw cuts and other machines in sash and door factory. No details reported.

Three men had fingers cut by saws in box factory.

Three men had finger cut off in sawmill.

Boy had two fingers mangled in machine in sash and door factory; both fingers amputated.

Man had finger caught in machine in box factory; hand badly injured.

Girl had hand badly injured in button machine in button factory.

Man badly injured by board thrown from a rapidly revolving pulley which drove it nearly half through his body.

Man caught on an unprotected set screw on shaft and thrown violently to the floor, sustaining permanent injury.

POLK COUNTY.

One employe had ankle sprained while employed in laundry.

Three employes injured in oil mill. No details reported.

One employe injured by acid in chemical factory.

Two employes had fingers injured in paper box factory. No details reported.

One man had leg broken and one man cut in head employed in tent and awning factory.

One man injured by falling lumber in furnace factory.

One employe had finger badly cut in laundry.

One man injured by having sliver driven in hand, employed in casket factory.

Five or six employes injured by cuts and bruises, employed in incubator factory. No details reported.

One baker caught fingers in dough roller in bakery.

One employe lost finger in incubator factory.

Four employes injured in wall paper factory. No details reported.

One man had little finger injured in self-feeder factory.

One man had hand mashed in foundry.

One shoemaker fell down stairs and broke a leg in shoe factory.

Six employes slightly injured, employed by street railway. No details reported.

One man's foot hurt, employed by transfer company.

One miller had hand injured throwing belt on moving machine in flour mill.

One man lost a finger in planer in machine shop.

One man burned by electric wire and one had finger crushed in furniture factory.

Four employes injured by cuts and bruises in packing house. No details reported.

Three employes injured by sprains and bruises in machine shop. No details reported.

POTTAWATTAMIE COUNTY.

Two men had fingers injured in implement factory. No details reported.

One girl had third finger cut off in machine in laundry.

One man fell from light tower, employed by electric light company; not seriously injured.

Two men injured by fall from building, employed by roofing company.

SCOTT COUNTY.

One man cut arm on broken glass in bottling works.

Five employes had fingers cut on cutting machines in broom factory.

One employe scalded and one had finger pinched in candy factory.

One employe struck by belt injured slightly in cracker factory.

Sixty employes injured during 1901 and 1902, in glucose factory. No details reported.

One employe had finger mashed in macaroni factory.

Twenty employes injured by bruises and cuts in metal wheel factory. No details reported.

One girl had fingers mashed and one boy injured by bursting of an emery wheel in button factory.

One employe cut finger in button factory.

Three employes injured in sash and door factory. No details reported.

Three employes had fingers cut off in tin can factory.

One man had three fingers cut off by circular saw in washing machine factory.

Three men injured by fall from scaffold; employed by contractor.

One man had finger cut off and twenty other employes injured in cigar box factory. No details reported.

Engineer lost an eye by discharge of ammonia in ice plant.

Ten employes in lumber mill injured. No details reported.

Boy's hand caught and crushed in job press in printing office.

One man cut hand with butcher knife in packing house.

One man hit by elevator and injured in grain elevator.

Man had leg cut with chisel and one man's finger cut with saw in planing mill.

Man had end of thumb cut off in washing machine factory.

Boy had hand crushed in machine in candy factory.

Girl had knee injured in loom in woolen mill.

WAPELLO COUNTY.

One man lost left hand at wrist and one boy lost left little finger at first joint in machines in farm implement factory.

Man had one finger crushed off in implement factory.

Man caught on plain shaft; both legs broken and one arm amputated. This happened in miners' tool and supply factory.

Two employes injured by elevator and two employes injured by explosion of a gasoline tank in packing house.

WEBSTER COUNTY.

Two men had hands crushed in cereal mill.

Two employes pinched in rollers in laundry.

One man had finger mashed in foundry and machine shop.

Four men injured by having fingers cut off and one man injured by a table leg flying from saw striking him in abdomen.

One man fell from plank in paint factory. No details reported.

WOODBURY COUNTY.

Engineer lost one finger in flour mill. No details reported.

One man had three fingers cut off and one man hit in eye by chip from saw, lost his eye. One man had toe broken in sash and door factory.

Five employes injured, being pinched by cakes of ice, while in the employ of ice company.

One hundred and eight employes injured in a period of two years, by cuts, scalds and bruises in a packing house. No details reported.

Two men injured in shop, moving heavy material, street railway company.

Man cut on arm by machine in harness and saddlery factory.

Employe had two fingers cut on soap press in soap factory.

One man's leg pinched in newspaper office.

One man injured by an elevator falling in a wholesale grocery.

Man had back hurt getting under elevator in hardware store.

Three men injured in brick and tile yard. No details reported.

Man fell down elevator shaft in dry goods store and broke his nose and suffered other bruises.

Boy ten years old fell down elevator shaft, breaking right leg. He was employed in a notion store, where elevator was located.

Man had both feet badly scalded while working in a packing house. No details reported.

Man had right leg scalded; stepped into a vat of boiling water in packing house.

WORTH COUNTY.

One man had hand crushed; one man had hand torn and one man had thumb cut off in tow mill.

FACTORY INSPECTION—PART IV.

A BRIEF DISCUSSION OF PRESENT METHODS OF REGISTRATION
OF BIRTHS AND DEATHS—DEATH RETURNS IN THE CENSUS
OF 1900—THE VALUE OF VITAL STATISTICS TO THE PUBLIC
AND THE MEDICAL PROFESSION—AND SOME NEEDED RE-
FORMS.

By F. I. Herriott, Ph. D., Professor of Economics and Political Science,
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NOTE.—In the following pages are reproduced with some re-arrangement and additions three articles that appeared in the *Iowa Medical Journal* in April, May and June, 1903, entitled respectively (1) "Death Returns in Iowa's Cities and the Profession," (2) "Vital Statistics: Their Value to the Public," (3) "Vital Statistics: Their Value to Physicians; and Suggested Reforms in Registration." The writer did not attempt an elaborate account of the practice in registration throughout Iowa, or aim to present an extended analysis of the subject of vital statistics. He addressed the medical profession in particular and the method of treatment was suggestive and hortatory rather than analytical. The special object he had in view was to arouse the medical profession of the state and the public to a realization of the serious significance of existing conditions and practices in the collection of vital statistics and the actual and possible dangers to public health and well-being from the negligent registration of births, diseases and deaths in our cities. The facts presented are not such as will greatly exalt local pride. But their importance, nevertheless, is such that no vain sentiment should be permitted to obscure their significance or delay their careful consideration by physicians and municipal authorities. Whenever the public health is in question it is well to bear in mind the salient observation of the *Gate City* in discussing (May 3, 1903,) the showings of Table No. II, as it affected the city of Keokuk: "As a rule the more disagreeable they are the greater necessity that they should not be ignored."

The conditions and practice in Des Moines alone are set out. There is, however, good reason for assuming that they are typical of conditions and practice in Boone, Cedar Rapids, Clinton, Council Bluffs, Creston, Dubuque, Fort Dodge, Fort Madison, Iowa City and Red Oak, cities where the registration records are so inadequate or so illy kept that the census authorities could not make use of the returns of 1900.

F. I. H.

June 20, 1903, University Place, Des Moines, Iowa.

I.

THE DEARTH OF LOCAL OFFICIAL RECORDS AND DATA.

A short time since in the course of some investigations into the problems of poor relief in Des Moines, the writer desired to ascertain the mortality of Iowa's Capital City and to study the returns of its health officers with a view to determining the relative healthfulness of various well marked districts or local communities within the city's corporate area, and the effect upon the employment and the economic condition of manual workers, of accidents, sickness or ailments and epidemic diseases. He did not really anticipate that he could secure any considerable variety of statistics presented in elaborate and minutely classified schedules, showing the healthfulness of the different industrial and commercial occupations, the rate of mortality in each, the days lost by working men and women by reason of illness, disease or accidents, and the effect upon wages and the standards of living.

But while he indulged himself in no large expectations, he did entertain a belief that he would be able to obtain some sort of official reports giving aggregates and summaries of the returns, showing the nature and extent of the general causes of disease and ill health and the rate of mortality. A few inquiries, however, soon convinced him that he had no business in entertaining any expectations whatever.

Neither the health officers nor the city council of Des Moines have ever published, so far as the writer can learn, any reports, in which the death or health returns have been systematically presented. Sometimes there have been city physicians who have compiled annual summaries and comparative statements of contagious diseases within the city's limits, which they gave out to the newspapers; but no permanent record was printed or preserved of such annual summaries. Research in the annual reports of the State Board of Health gave no specific data relative to Des Moines and such as was presented pertained simply to the totals of marriages, births and deaths for counties and not for lesser local areas. In short he was speedily forced to the conclusion that if he wanted vital statistics of Iowa's largest city, it was necessary to dig them out of the records, from the files of the city clerk's office or from the books of the county clerk, or from the returns of contagious diseases made to the State Board. But should he set about such a laborious task, he discovered that he would soon become oppressed with a robust suspicion that the official records were all not only inadequate, but to a greater or less degree inaccurate and in various ways unreliable.

There exists a condition of non-enforcement of the laws of Iowa regarding the registration of births, dangerous diseases and deaths that should receive the earnest consideration of both the medical profession of the state and the public. For, without question, it is largely in the indifference of the profession and in the negligence of municipal administrations respecting the collection of vital statistics that we find the explanation of many of the astonishing exhibits of death returns in Iowa's cities reported

in the recent national census. The relative death rates of our leading cities and the noteworthy contrasts between the health of the cities of Iowa and the health of nearly all of the large cities in the states adjacent to Iowa, make the reformation of current practice in the registration of deaths and of the unsanitary conditions in our cities a matter of urgent concern to public authorities, to the profession and to the public.

This is a subject that pre-eminently concerns the medical profession of Iowa because it is their particular worth, the preservation of the public health, that is involved. It is a matter that may well engage the careful attention of the county and state societies as recently re-organized; for, as Dr. Geo. H. Simmons, of Chicago, who has been so prominent in the movement for re-organization points out, vital statistics or statistics of disease are one of the great needs of the profession, and "collective investigation" is an important part of the work of the societies.

II.

STATUTORY PROVISIONS AND CURRENT PRACTICE.

The Code of Iowa requires local assessors when making their annual rounds to ascertain and report to the county clerks the number of births and deaths. These totals, together with the marriages, are reported by the clerks to the State Board of Health at the State Capitol.* The results have been decidedly unsatisfactory. The secretary of the State Board in his report for 1901, declares the returns of births especially, and of deaths, to be far from complete and not always correct.† The county clerks in their state convention in 1900, voiced their dissatisfaction with the method and the results by recommending the abolition of the present practice and a return to the former procedure. From 1881 to 1897 physicians made the returns of births and deaths to county clerks, but many were negligent or not disposed to comply with the directions of the State Board and the Board had no authority to enforce observance of the statute by the imposition of adequate penalties for failure to make the returns promptly and fully.

The physicians of city boards of health of the state are requested to make a daily report to the State Board of contagious diseases when such are epidemic in their communities, but no tabulations or comparative statistics for the state at large are regularly compiled and published. And the secretary of the board informs the writer that with the exception of the present physician of the city board of health of Des Moines, none have ever complied with the state board's request for continuous daily reports.

The city ordinances of Des Moines contain various provisions respecting health and death returns that might give us some valuable vital sta-

* See Code sections 2566-7.

† See report of Board of Health, 1901, pp. 108-109.

tistics if any attention were given the matter by city administrations. Before the bodies of deceased persons can be buried, cremated or transported from the city, the fact of the death and the causes thereof must be duly certified by the physician in attendance, or by the coroner, to the undertaker in charge, who must present and file such certificate with the city clerk when he applies for a burial permit. This certificate of death provides for the return of the name, color, nationality, sex, conjugal condition, date and place of birth and death, nativity of parents and the causes of death. The ordinance requires physicians or coroners to make out this certificate within twenty-four hours after death. The city clerk is specifically enjoined not to issue permits for interment or removal of dead bodies until this certificate is properly made out and signed; and the keepers of cemeteries or tombs are expressly prohibited from receiving bodies for burial unless the undertaker presents the clerk's permit. Every month the clerk is required to report the number of deaths and causes to the State Board!*

Under these provisions one would think that the returns of deaths, at least as regards the number dying, would be accurate and complete. But laws and ordinances may command, but man's practice does not always conform to their mandates.

The uniform response to the writer's inquiries has been that it is the exceptional doctor that makes out the death certificates promptly after a patient's demise. Further, undertakers as a rule, take bodies to the cemeteries and receive permission to bury or inter them before the city clerk issues his permit. It seems to be the general practice, at any rate it is very common, for the undertakers to fill out the entries in the blank certificates of death of those they take charge of and near the end of the month they take them to the various doctors to sign and to insert the cause of death if the undertaker himself has not done so.

These certificates, three, five or a dozen, as the case may be, are then sent by each undertaker to the city clerk. Within a week or so, the undertakers receive the permits for burial for those they had buried, which they in turn mail or send to the sexton or keeper of the receiving cemetery. One undertaker informed the writer that in his experience he had found only one physician in the city who made out the certificates himself within the time prescribed by the ordinance.

It is not by any means the rarest thing for permits for burial to be issued before the clerk receives the physician's certificate. An undertaker sometimes finds it difficult to get the signature of the attending physician. He goes to the latter's office, often two or three times, but fails to find him. He leaves the certificate for the physician to sign; but the physician is forgetful or negligent and many days pass before he signs it. Meantime, the undertaker must needs have his permit to file with the keeper of the cemetery. He appeals to the clerk, relates his efforts to secure the physician's signature and his annoying delays and asks the city officer as a favor to issue the permit. The clerk, as a matter of good fellowship may do this and it may be two weeks before the certificate is returned. It may, of course, never be filed.

* See the Revised Ordinances (1900) of Des Moines, sections 399-403.

Physicians often manifest a decided disinclination to signing death certificates. They seem to consider that, in some vague way, it is an admission that they have been incompetent, or negligent, and that they will suffer in public estimation if the city clerk has many of their certificates on file. One may hear interesting stories of efforts to avoid the performance of this public duty or to shift it upon others.

An examination of the certificates in the clerk's office shows that there is not much zeal expended in certifying answers concerning all the inquiries made, some fifteen in number. What can be answered without inconvenience or special inquiry is returned, otherwise no entry is made. The most important delinquency relates to the reported causes of death. Inquiries of various physicians elicited varying answers. Some thought them fairly correct. Others stated frankly their skepticism respecting their value. The general opinion seems to be that the superficial causes rather than the real or efficient causes of death are given, at any rate in a very large percentage of the cases. The fact that undertakers only go around to the physicians once a month to get them to certify as to the causes of death that may have taken place three or four weeks prior, of itself strongly tends to confirm the truth of this assertion. Further, the space allowed in the blank for contributory causes, viz: one short blank line, is insufficient, so much so that few take the trouble to refer to them. Peritonitis and "heart failure" are called upon to do duty for a multitude of primary causes of death, when they are simply resultant phases or ultimate effects of antecedent causes and conditions that are the real factors; and give no substantial clue to the real causes producing death. One often wonders whether "pneumonia" was the primary cause or simply the ultimate manifestation of measles or the general collapse of the system succeeding, say, laparotomy.

The city clerk does not make a monthly report of deaths and causes to the State Board of Health as the ordinances have for years required. The secretary of the State Board was not aware of such a requirement of the city clerk of Des Moines until the writer asked to inspect the reports filed with him. The city clerk does, however, make such a monthly report to the city physician, giving the causes of death, the number, sex, color and ages of those dying from each cause. Up until about three years ago it appears that no duplicates or summaries of these reports were kept by the clerk. Since then a summary which shows simply the total number of adults and minors male and female, dying in the month reported, and the number dying in the various city hospitals, charitable institutions, and jails, together with the premature and still births, is made and pasted in the back of the register of burial permits. These detailed reports seem not to have been made a part of the archives of the city physician's office. Leastwise the present incumbent received only eight such monthly summaries from his predecessor. Besides the daily reports which the city physician makes to the State Board of contagious diseases, he also sends an annual report or summary of these diseases to the head of the National Marine Hospitals.

III.

THE SHOWING OF THE CENSUS OF 1900.

The national census of 1900 presents us some showings of health returns in the cities of Iowa that should be of profound interest to the people of the state.

In the first place, Iowa, whose citizens are so prone to boast of her foremost position among the states, of the marked intelligence of the people and the high level of their civic life, is classed with those states whose health statistics are seriously defective, because unsystematically or negligently collected. So great was the insufficiency of Iowa's returns that the Census Bureau did not venture to compute the death rate for the state as a whole.* What should be a matter of no little chagrin to the people of Des Moines, is the fact that the official returns of the city where the state has its seat of government, the city with nearly double the population of any other city in the state, could not be utilized by the census authorities because they were so defective. No information is obtainable concerning Des Moines in the two volumes of the census devoted to vital statistics; except one reference that is made to Des Moines for the purpose of showing the amount and rate of error in the city's official registration of deaths. Returns were secured, however, from Burlington, Davenport, Keokuk, Marshalltown, Oskaloosa, Ottumwa and Sioux City and are presented for what they are worth but with constant caveats against placing too much dependence upon them. The facts exhibited by the census are worthy of serious consideration.

The chief statistician in charge of vital statistics, Mr. William A. King, tells us that the official reports and records of registration of births and deaths were so defective in various states and localities that the enumerators of the census were directed in those districts to ascertain and report the death losses. Much difficulty was experienced. The enumerators, usually political appointees, were not the most adept nor industrious in securing the desired data and their reports generally fell short of the returns reported from the registration records; but their work served to disclose numerous deaths not on the registration records. The following table shows the number of deaths reported by the enumerators, those found on the registration records, the number added by reason of the enumerators' disclosures, and the total, together with the percentage of each class for seventeen cities in Iowa.

* Twelfth Census (1900), Vol. III, Vital Statistics, part I, table 19, p. 884.

TABLE I.

COMPARISON OF ENUMERATORS' AND REGISTRATION DEATH RETURNS IN CITIES IN IOWA.*

Cities.	Enumerators' returns.	Registration records.	Added from E. R.	Total.	Percentage.	
					Of E. R. added.	R. R. forms of total.
Boone	70	84	23	107	32.9	78.5
Burlington	246	896	8	404	8.8	98.0
Cedar Rapids	181	245	38	323	21.0	88.2
Clinton	231	276	51	327	22.1	84.4
Creston	69	82	17	99	24.6	82.8
Council Bluffs	240	327	44	371	18.8	88.1
Davenport	295	578	16	594	5.4	97.8
Des Moines	492	723	127	850	26.8	86.1
Dubuque	323	474	61	535	18.9	88.6
Ft. Madison	89	106	19	125	21.3	84.8
Keokuk	167	287	20	287	12.0	96.0
Iowa City	88	91	81	122	37.8	74.6
Marshalltown	90	169	11	180	12.2	98.9
Muscatine	155	223	22	250	14.2	91.2
Oskaloosa	74	165	14	179	18.9	92.2
Ottumwa	167	315	13	323	7.8	96.0
Sioux City	290	420	48	463	14.8	90.7

Des Moines does not have the special distinction of having the most deficient registration of deaths in the state but she comes uncomfortably near attaining it. In Boone and Iowa City the enumerators found a greater percentage of deaths unregistered; and Clinton and Creston had a smaller proportion of their deaths on the records than Des Moines. But twelve cities in Iowa can claim precedence of the capital city in the efficiency of their death registration. Burlington has the best kept records judged from the percentage of entries, only eight out of a total of 404 reported deaths being found by the enumerators unrecorded or only 3.3 per cent of the returns; while Des Moines is charged with a deficiency of 12% unregistered deaths out of a total number of 850 or 26.8 per cent of the returns of the enumerators.

The existence of such defective administration in the registration of deaths in Iowa has an ugly significance that we shall consider in a later connection.†

The returns of the census of 1900 for the non-registration states are not sufficient for absolute or wholly reliable conclusions as to the total number of deaths or causes of death. But while inadequate in these important respects—which is clearly pointed out by the chief statistician in charge of vital statistics, and the public warned against improper deductions from the returns made which are the returns of registration records corrected by the enumerator's reports—the showings do afford substantial bases for comparative observations and deductions. The rate of error or of insufficiency in the returns may reasonably be assumed to be practically uniform throughout the several cities from which reports and returns were secured; and relative healthfulness or mortality can therefore be fairly approximated from the comparison of death rates.

* *Ibid.*, p. XI.† *Post* pp. 17-18.

The following table presents the death ratios for various ages and for all ages in eight Iowa cities ranging in population from 9,000 to 35,000. The ages taken represent first the most critical in the struggle for life, viz: the period of infancy, and second the most important as regards industrial life and ability to labor and maintain independent livelihood, viz: The period from fifteen years to forty-four years. The rates given are of course the deaths per 1,000 of the population under each head.

TABLE II.
DEATH RATES AT VARIOUS AGES IN IOWA CITIES.*

Cities.	Under 1 year.	Under 5 years.	15 to 24 years.	25 to 34 years.	35 to 44 years.	All ages.	Total popu- lation.
Burlington	129.6	81.0	7.6	12.4	9.8	16.6	23,201
Davenport	129.4	81.2	5.7	9.2	7.8	15.9	38,254
Keokuk	154.5	48.5	6.6	11.6	14.5	19.1	14,641
Marshalltown	104.7	37.8	11.6	10.8	10.0	15.7	11,844
Muscatine	128.4	29.9	6.8	8.7	16.5	17.1	14,078
Oskaloosa	177.6	66.9	6.5	7.4	10.9	18.1	9,212
Ottumwa	149.6	47.1	7.0	9.9	8.5	17.4	18,197
Sioux City	181.1	86.7	5.8	6.7	9.6	18.1	38,111

Whether the death rate in Iowa in 1900 was materially less or greater than 1890 we cannot say. The data was insufficient in 1890 in all of the cities but two so that we have no basis for comparison. The two that are reported, Davenport and Keokuk, offset each other, as the death rate in the former fell from 16.4 in 1890 to 15.9 in 1900, while the rate in Keokuk increased from 14.7 in 1890 to 19.1, an astonishing increase of 29.9 per cent in the ten years.

There are many things in the exhibits of the table above that may well engage the earnest thought and study of the citizens of each of the several cities. Why should the cities with the largest population, Davenport and Sioux City, have a smaller death rate than Keokuk and Oskaloosa, having respectively less than one-half and one-third the inhabitants of the former cities? What causes the striking differences in the rate of infant mortality in Keokuk and Oskaloosa compared with the rate in Marshalltown, 177.6 infants under one year of age dying in Oskaloosa and but 104.7 in Marshalltown?

What produces 12.4 deaths among people between the ages of 25 to 34 in Burlington and only 6.7 in Sioux City? Why does Marshalltown with its low rate of infant mortality have such a high rate among the adult population compared with most of the other cities? Why should the reverse be true in Oskaloosa?

If we compare the death rates of the cities of Iowa with those of the leading cities in our neighboring states, we are impressed in general with an unfavorable contrast. Chicago has a general death rate less than Burlington, Keokuk, Muscatine, Oskaloosa or Ottumwa. Madison, Minneapo-

* Census 1900, *Ibid*, pp. LIX-LX and LXXXI-LXXXII.

lis, St. Paul, Lincoln and St. Joseph each excel in healthfulness the best Iowa city, as measured by the general rate of mortality. Our average is rather more in the mortality of infants and it is markedly higher for the important periods of fifteen years to twenty-four years, and twenty-five years to thirty-four years. Leavenworth, Kansas and Kansas City, Missouri, have a much higher rate among infants than do Iowa's cities; likewise Milwaukee. But with the exception of Leavenworth the general death rate is higher in cities in Iowa than in the twelve cities listed in the table given below. Moreover it is especially to be noted that cities having two, three and four times the population of cities here (for example, Minneapolis and St. Paul,) have a lower death rate than we find in Iowa's urban areas.

TABLE III.
DEATH RATE IN CITIES IN STATES ADJACENT TO IOWA.*

Cities.	Under 1 year.	Under 5 years.	15 to 24 years.	25 to 34 years.	35 to 44 years.	All ages.	Total popula- tion.
Chicago	146.6	49.4	5.8	8.1	11.4	16.2	1,698,575
Galesburg	95.2	27.1	5.8	6.6	8.4	14.6	18,607
Quincy	120.9	37.9	6.1	8.8	9.2	15.8	36,252
Madison	97.1	29.4	3.0	5.8	6.8	11.8	19,164
Milwaukee	180.2	53.0	5.4	6.5	9.5	15.9	235,818
Minneapolis	102.0	29.3	5.1	5.2	7.7	10.8	262,718
St. Paul	93.9	27.7	3.3	5.0	7.2	9.7	168,085
Lincoln	134.7	33.8	3.6	7.1	9.7	11.8	40,169
Omaha	151.9	44.9	5.6	7.0	10.5	13.5	102,555
Leavenworth	184.4	59.2	7.0	9.2	14.8	20.2	20,735
Kansas City	186.8	60.8	8.6	9.9	12.6	17.4	168,538
St. Joseph	89.0	26.0	3.8	4.4	7.0	9.1	102,979
St. Louis	162.4	49.8	7.2	10.3	13.6	17.9	575,283

The explanations of the variable death ratios are of no little concern to the inhabitants of our communities. Human life, industrial prosperity and social welfare are seriously in question; and it behooves the citizens of our cities to ascertain whether the explanations are to be found in their climate and location, or in the nature of the industrial occupations of their inhabitants, or in defective police and sanitary administration, or in negligent and insufficient registration. Not only is it incumbent upon them to ascertain the causes, but to discover if they are preventable causes or not and to what extent the local conditions and administration can be improved with a view to their reduction. If the astonishing increase in the death rate in Keokuk represents actual conditions in the Gate City, her citizens live under the shadow of dangers that speak ill of their habits of life, climate or city administration, a condition of affairs not to be endured with the patient, good natured resignation with which they bear ordinary civic corruption, but to be smitten hip and thigh among both high and low.

The physicians of Keokuk, Oskaloosa and Ottumwa should for professional reasons if for no other, be keenly alive to the significance of the

* *Ibid.*

high rate of infant mortality in their respective communities as compared with that in other cities in Iowa. For there is no period when life is so dependent upon the physician's skill, knowledge and care, as that of infancy; both mother and offspring are peculiarly in need and especially responsive to adequate attention. And the citizens of those cities may well ask of their physicians why such a high death rate among their infant population. Is it due to the inefficiency and negligence of their practitioners? Or is it due to climate or to unsanitary conditions in drainage or sewage disposal? Or is the explanation to be found in the character of milk supply or in the water supply of those cities? If any of these, why have they not been warned and protected by preventive measures? Whatever the explanation, it behooves the physicians of those cities out of mere regard for their professional reputation at home and abroad to seek forthwith the causes, to expose them and urge thorough going reform to remedy the evils producing such unhealthy conditions and such fatal results. And it becomes a matter of no less urgency for the profession of the state to discover the reasons for the unfavorable returns of cities in Iowa as compared with the returns from the cities of adjacent states.*

The causes of Iowa's mortality are probably the least accurately presented of all the vital statistics relating to Iowa in the recent census. The number of deaths from each of the important causes reported for each of the eight cities previously taken is shown in the succeeding table, No. 4. The deaths from accidents are not obtainable. The showings are more interesting than instructive. They do not represent all the deaths from all causes but only from those given.

* At the time table No. II and the comments above appeared in the *Iowa Medical Journal* (April 10, 1908), it seems that the people of Keokuk had already begun to complain about the character of their water supply. The author's adverse exhibits and comments affecting Keokuk were reproduced in the editorial columns of the daily *Gate City* (April 17th and May 3rd) and vigorous measures were urged by the editor with a view to ascertaining the cause or causes of the city's abnormally high death rate as compared with other cities in Iowa or adjacent states. That journal pressed the matter with great vigor and effect. It did not attempt to indulge itself or its readers with any foolish local pride—such as is frequently encountered when serious unsanitary conditions are first exposed; and in no small degree to its discussions may be accredited the action of the city health department of Keokuk on May 16th, when an investigation was made of the intake, water mains and filters of the water company's works. An extremely unsanitary condition of affairs was found to exist. Meantime a "Pure Water Commission" had been appointed and several of its sub-committees made special and extensive reports (see *Gate City June 13th*) and the prospects indicate that some radical reforms will be instituted. If any decided improvements are brought about the health returns of Keokuk will prove very interesting and instructive.

TABLE IV.
DEATHS FROM CERTAIN REPORTED CAUSES.*

Cities.	Diphtheria and croup.	Typhoid fever.	Diarrheal diseases	Consumption.	Cancer and tumor.	Heart disease and dropsy	Pneumonia.	Liver diseases	Nervous diseases.	Urinary disease.
Burlington	7	14	11	41	18	87	88	8	51	29
Davenport	1	28	27	51	80	48	87	9	89	29
Keokuk	1	15	25	28	11	21	80	3	24	8
Marshall town	1	18	10	13	8	11	12	2	28	6
Muscatine	1	18	10	15	9	24	84	2	26	7
Oskaloosa	18	4	12	15	6	11	14	.....	20	6
Ottumwa .....	.....	18	22	34	15	38	41	6	24	9
Sioux City	21	13	28	89	14	85	29	9	56	19

Because of the indifference manifested towards registrations of death returns, the valuation to be placed upon the exhibits in Table IV is very doubtful; but it is without question an understatement rather than the reverse. It would be interesting to know why the people of Davenport suffer more from "nervous troubles" than do the people of Sioux City. What is there in the character of the people or in the climate of Davenport, on the Mississippi, that produces conditions provocative of more meningitis, paralysis, apoplexy, epilepsy, insanity and mental diseases and the like than exists in the city on the Missouri river.

Similar questions suggest themselves concerning heart failure, consumption and cancerous troubles. In one disease only does Davenport sustain a relative advantage, namely: in deaths from diphtheria and croup.

IV.

THE NECESSITY FOR REGISTRATION OF BIRTHS AND DEATHS.

In one of his luminous essays Emerson observes that men seldom appreciate a principle until they can see it in the light of a fact. History justifies a paraphrase. The public never realizes the need of reform in government in city or state nor proceeds earnestly to bring about reforms in administration until the citizens perceive clearly wherein their individual welfare is adversely affected. If the health of citizens, their wealth and happiness are lessened or put in jeopardy, if the industries and prosperity of one's city or state are endangered people will arouse themselves to energetic action and institute effective measures to remedy conditions inimical to the general welfare.

One would think it superfluous and almost pedantic in these days to point out the reasons justifying the collection, compilation and publication of vital statistics. The fact of the enactment of ordinances for the

* *Ibid.*, pp. 336-339.

registration of births, disease and death of itself indicates that it has been considered wise or necessary to have some such provisions of law. But the evidence is overwhelming that both the public and the medical profession in Iowa do not fully apprehend the dangers involved in the negligent administration of the ordinances governing the registration of births and deaths and the disposal of the dead; let alone appreciate either the great practical value of vital statistics to physicians or their pecuniary significance to taxpayers.

In discussing the showings of the federal census which disclosed the defective registration of deaths in Des Moines, it was observed that the discrepancies disclosed by the enumerator's returns had an ugly significance.* A moment's consideration of the object of the ordinances previously referred to, will indicate its nature and the reflection should make us pause.

What is the purpose of the city ordinances respecting the burial or disposal of dead bodies? Are they not enacted to protect the people of the community from contamination, dangerous diseases and crime? This is their sole aim. What does the exhibit of our negligent local administration made by the census mean? It means that men, women and children have died, have been buried and perhaps have been sent out of the local jurisdictions without due official cognizance. And this means in plain English that people may die of dangerous contagious diseases or be foully dealt with, poisoned, murdered and citizens are without the assurance of the constancy of even that modicum of protection implied in formal official notice of deaths and certification of causes thereof prior to interment.

Although the census enumerators reported only 492 deaths in Des Moines when the books of the city clerk recorded 723, yet the enumerators found 127 deaths not on the registration records. How many more may we presume would have been discovered had their investigations been thorough going. Surely one cannot be accused of sentimentalism in expressing the belief that the experience of Des Moines during the past three years with outbreaks of virulent contagious disease and horrible crimes makes the strict and vigorous execution of the ordinances relating to registration of deaths a matter of the utmost importance to the peace and safety of our citizens.

The reasons for registering births and their antecedent and accompanying conditions, while perhaps not so imperatively urgent as in the case of deaths, are more or less the same. Society and the state must needs know the rate and character of birth, whether the population is increasing or not, whether births are more numerous among the well-to-do or among the poor and dependent, whether among the industrial or the idle classes. For social, political and military reasons our publicists and law makers must be able to determine the number and character of the incoming generations. In addition to these matters there is a great consideration of legitimacy and illegitimacy of births, with the host of family and property rights, and questions of police and the public support involved. Unless the state requires the registration of births and due account of the attendant parental relations there is confusion that jeopardizes rights of property and increases litigation and aggravates social evils.

*Ante. p. 12.

V.

ARE VITAL STATISTICS WORTH WHILE?

But is it necessary or expedient for the state or city to do more than merely to compel the recording of births and registration of deaths and the certification of causes by physicians or coroners? Is it advisable to collect greater or less detailed information concerning deceased persons and to provide for the annual compilation, analysis and publication of such vital statistics? Is it worth while for a community to have such information?

There are precisely the same reasons for securing, preserving and publishing regularly and often the statistics of the health of our cities as there are for preserving historical records or for publishing the reports of city, county and state finances. If citizens and taxpayers care to realize what they are paying out money for, if they wish to appreciate the significance or value of their public service or the relative importance of various classes of public undertakings or financial burdens, they must have not only statements of the current year, but those of former years in order to contrast previous expenditures with present outlays. Comparative statistics presented in well devised schedules so as to exhibit relative amounts and values published year after year are essential to good government and efficient administration.

Is it sensible, is it expedient for life insurance companies to preserve the records of their death losses and from them compute the rate of mortality among their policy holders? Can the business of insurance be thereby conducted the more safely and the more profitably? The remarkable growth of actuarial science in recent years demonstrates the immense commercial importance of experience or mortality tables. The amount or rate of financial risk carried by insuring companies can be pre-determined with an extraordinary degree of precision. One does not go beyond bounds in saying that the vast volume of life insurance in force today and the solvency of the insuring companies rests absolutely upon the confidence of the business or investing public, in the showings of the experience or mortality tables which the companies have been compiling for so many years. In other words, upon vital statistics.

The need for the systematic and continuous collection of vital statistics by our local and state authorities is not a whit less urgent and not a jot less valuable financially. Indeed in essence, statistics of crime and health are to municipal government, to police and sanitary insurance what mortality returns are to life insurance. For by means of such returns we can demonstrate the average risk to the lives and property of citizens, learn the degree of efficiency of the police and sanitary authorities, discover in what localities risks are the greatest and the causes, and in consequence can the more intelligently devise ways and means for the prevention of our civic ills. Municipal government that is based upon careful study of its experience tables, that gives heed each year to the lessons they teach, insures progressive improvements in conditions of life and greater safety

and profit to all concerned. "In fact the primary object of collecting statistics," says America's leading authority on this science, the late Professor Mayo-Smith, "is to serve administrative purpose and to guide legislation."*

In the study of social phenomena it is usually very difficult, if not impossible, to determine exactly what conditions exist, the extent of the prevalence of disorder or to ascertain the law of causation and consequence from isolated facts or from a comparatively small number of instances. There is such a multiplicity of conditions, the currents of cause and effect cross and recross and confuse one with the other so constantly that unless we carefully classify our observations and view them in masses we cannot accurately determine the direction or the rate of social disturbances, or estimate the seriousness of anti-social conditions. It is consequently only when we possess statistical aggregates, summaries and comparisons that we can measure or appreciate our civic conditions and needs whether in matters of public expenditures as a whole or in the work of police and sanitary protection.

Persons judging social or civic affairs solely by their own experiences or observations, which necessarily are very limited are generally unable to see the forest for the trees and underbrush. They misjudge the real situation, sometimes exaggerating actual conditions, at other times grossly under-estimating the nature and importance of phenomena round about them. This is frequently to be observed in connection with contagious diseases. The public remain indifferent during the early stages when the epidemic is spreading. Then suddenly the community awakes in a spasm of fear. Imagination increases the numbers of those afflicted out of all reason and frantic and oftentimes oppressive or ridiculous suppressive measures are resorted to, when if a city had had a well organized Health Bureau in whose efficient work and reports the citizens had full confidence, the disease would have been speedily and accurately known and promptly dealt with.

On the other hand, however, it is a common characteristic of mankind not to be particularly interested in fatalities or disease unless they perceive the mass and are startled at its proportions and significance. People's senses are usually so dulled by daily exhibits in the press, that they are more or less indifferent about the prevalence of various serious diseases. They know in a vague and general fashion that considerable disease exists, they may occasionally witness frightful fatalities and now and then see the terrible ravages of disease among some of their friends or neighbors, but their real extent or significance are not brought home to them in such a manner as to make general precautionary or corrective measures on the part of the public authorities seem advisable. But if the complete returns of accidents, disease and deaths are collected, analyzed and published the urgency of remedial action becomes apparent.

Des Moines affords us interesting illustrations of the foregoing. Both the public and the medical profession of the capital entertain the belief that the city enjoys greater health than does the majority of cities in

*Statistics and Sociology, p. 16.

Iowa. The grounds for this confidence are questionable. Aside from surmises based upon the varying observations of this, that, and the other, this belief rests upon the annual reports of the city health department to the authorities of the National Marine Hospital regarding contagious diseases. Now it is notorious that this class of diseases are the most difficult to get reported promptly and properly. The State Board of Health has complained for years of the inadequate reports sent to it from the city physicians of the state. While there has been some improvement in these respects in Des Moines in recent years it is not likely that contagious diseases have ever been fully reported or known either to the medical profession or to the public. So that while we may presume that the capital city enjoys a fair degree of health the citizens of Des Moines do not know from authentic information properly collected and analyzed whether they live in conditions better or worse compared with conditions in other cities in Iowa or in other states round about. The astonishingly adverse showings of the late national census create a presumption that the death rate in Des Moines is higher than in the cities in neighboring states, and there is no reason for presuming that it is notably lower than in other cities in Iowa.

From the nature of her topography the vital statistics of Des Moines, if rightly collected, would show some extremely interesting results. The city is cut in three large segments by the junction near the center of the corporate area of the Des Moines and Raccoon rivers. The residential districts in which the majority of the well-to-do live are upland plateaus. Nearly all of the business houses, manufacturing establishments, most of the tenement houses, a large proportion of the homes of the manual workers and practically all of the city's poor are to be found in the bottom lands of the river valleys. In these lower portions of the living area during the night, and often during the day, for weeks at a time in the winter season, fog and damp heavily laden with smoke from hundreds of houses and furnace chimneys hangs over the city. This condition must have an appreciable effect upon health in these sections that could be measured to a greater or less extent if the health returns could be compiled. Again in many portions of the city the residents are without water and sewerage mains. They depend upon wells or springs and cess pools. A careful collection of the returns of disease throughout all sections of the city and their tabulation by districts would give the public some very valuable information as to the nature and extent of serious diseases such as typhoid that are traceable to impure water supply and imperfect sewerage disposal. The possession of such statistics would enable the city authorities easily to apprehend the causes of epidemic and their location.

VI

THE COMMERCIAL VALUE OF STATISTICS.

Besides these potent reasons for the collection of vital statistics that affect directly the welfare of individuals there is another important consideration that should not be overlooked.

This is their commercial value to our cities and state.

It has long been the practice of most western states and nearly all of their thriving cities to maintain bureaus that put forth great efforts advertising the advantages of their cities for industry and commerce, for homes and profitable living and by innumerable ways they seek to secure manufacturing enterprises and immigration. Every one of the prosperous and ambitious cities of Iowa has a "Commercial Exchange," or like organization that is strenuously active in promoting their growth and prosperity. There is a keen rivalry between them to capture manufacturing establishments and increase their population. They not only set forth their own advantages, but they exhibit the relative disadvantages of their rivals. Now the health returns of cities is a most important element in public estimation. People desire to locate where natural conditions are favorable to health. If disease is prevalent the expenses, as well as the dangers, of living are greatly increased; and other things being equal people will settle in the locality that can exhibit the best bill of health. A high death rate among the working population necessarily affects seriously the calculations of manufacturers and it may be the chief fact determining their decision when contemplating removal from or to a particular city; since unhealthy conditions are likely to mean increased costs of production to the employer of labor.

It does not require any special power of divination to perceive how seriously the exhibits of the recent national census affect the industrial welfare of the cities of Iowa. The immigration bureaus and commercial bodies in all the states round about Iowa with but few exceptions can show that conditions in their cities are more favorable to health than in Iowa, and we may rest assured that their enterprising citizens will emphasize this unfavorable contrast continuously to the pecuniary loss of the cities of Iowa. Whether the census showings are correct or not is not the main consideration in the current ethics of competition. The fact that counts disastrously is that, in the only general record that gives us information gathered systematically under uniform methods in all of the states, the returns reflect seriously upon the condition of health in the cities of Iowa. Moreover this adverse record will stand until there is thorough reform in the sanitary conditions and in the methods of collecting and publishing the returns of disease and death in our state.

There is a general opinion entertained by Iowans that Iowa enjoys conditions favorable to health. More than this, that life is more secure here, more exempt from disease that results fatally than in states adjacent to Iowa. In large degree this opinion is chiefly surmise, born of exuberant local patriotism. But the notion is not based wholly on the presumptions

of natural optimism. Up until 1886 the experience of life insurance companies in Iowa indicated that the rate of mortality in this state was markedly less than the average in the country and materially less than the rate in the states on her borders. Thus the ratio of the actual losses of insurance companies to their probable losses was as follows: Illinois, 87; Missouri, 111; Kansas, 86; Nebraska, 61; Dakota (North and South), 92; Minnesota, 107; Wisconsin, 77, while the loss in Iowa was but 76, and the ratio for the nation was 98.* Insurance risks and losses are, it is to be remembered, preferred risks, namely selected cases and do not therefore represent necessarily the general death rate of the state. But the very fact that they are preferred risks gives us in many respects the very best kind of a base line from which to determine the effect of climate and general sanitary conditions upon health and mortality.

But be this as it may, the census returns compiled from the records of our cities constitute an indubitable indictment of the sanitary conditions in Iowa's cities and for a score of reasons we should disprove the charges therein. The citizens and commercial bodies of Iowa can ill afford to permit the matter to go by default. Because if the death rates are true as reported it is high time some aggressive measures are being instituted to remedy the unhealthy conditions that produce such high death returns among our infant population and among the manual working classes in several of our cities, as in Keokuk, Oskaloosa and Ottumwa. And if the returns are incorrect and unjust then it is not less desirable that this be proven conclusively and the facts published abroad for the sake of the welfare of our cities and the preservation of the fair name of our state.

VII.

THEIR VALUE TO WORKINGMEN AND TAXPAYERS.

Various classes are especially interested in the collection of comprehensive vital statistics. Not the least concerned are manual laboring men and labor unions. The welfare and advancement of laborers depend chiefly on standards of life. These both fix and adjust themselves to wages, which in turn are more or less dependent upon the laborers' ability, their physical strength and nervous energy and capacity. The nature of the laborers' occupations and surroundings in large measure determine his health and length of life. If workers live in miserable hovels, or in crowded tenements, if they work in miasmatic surroundings or amidst noxious gases or fumes or in dangerous occupations, health is impaired, energies and capacity for labor are lessened, employment is shortened; there is a decline in the grade of occupation and in wages. It becomes therefore a matter of primary importance to working men in particular as well as to society in general to know the effect of climate, location, occupation and disease upon the health and welfare of laborers; for it is

* See Meech's System and Tables of Life Insurance (E1. 18 C) p. 167.

now conceded, almost universally, to be among the first duties of the state, for reasons of police, sanitation and humanity, to regulate the conditions of labor and industry with a view to the protection of the lives, limbs and health of manual workers. Extended experience has shown that it is mostly by the systematic collection of vital statistics that the real influence of surroundings and occupations on the condition of laborers can be demonstrated with anything like certainty. Vital statistics have been the foundation facts upon which modern factory legislation has been based and promoted.

It is somewhat strange that Iowa possesses no trustworthy statistics of accidents in her industrial occupations, and stranger still that the labor unions of the state have not vigorously urged the collection of such data by the state bureau. Nearly any day one may read of some serious accident in our cities in shop or factory. A man, or woman, or child, is caught in the gearing of machinery, in wheels or belts; or revolving wheels fly asunder, or engine boilers burst; and they are instantly killed or horribly mangled or permanently incapacitated for labor and self support. What the actual number of such accidents is, what their nature and consequences no one knows. But that they constitute a very considerable cause of death, misery and want goes without saying. In the report of the State Labor Commissioner for 1901 a strong plea is made for legislation to protect workers near dangerous machinery. At the last session of the legislature representatives of organized labor urged such enactments. If they could enforce their appeals by definite statistics of actual catastrophes their number, variety and effects, the chances for favorable action on the part of the legislature would be increased a hundred fold.

All persons or organizations giving or directing the bestowal of poor relief or desirous of elevating the level of the life of the poor, have a deep interest in the effect of illness, disease or accidents upon the social condition and earning capacity of manual workers. To what extent are they made dependent upon private or public relief-giving agencies? Is the debility reported as the cause of non-employment due to unhealthy climate, swampy surroundings, noxious vapors in workshops, or to bad habits of life and hereditary causes, or to contagious or infectious diseases?

Not the least interested in vital statistics is the taxpayer. Society must have protection from crime, disease and pauperism. Are the measures in force adequate and the results thereunder satisfactory? Are the outlays therefore excessive or insufficient? Are the revenues expended for police and sanitation well or ill spent? It is not possible to answer the inquiries that prudent economy naturally asks when annual bills come in unless the people have set clearly and fully before them exhibits of the amount and nature of crime, disease and pauperism, their distribution, causes and effects. It is just as necessary for our city councils and the public to have before them such a bill of health and of conduct in order to know whether the outlays for the police and health departments have been worth while or not, as it is for the merchant to have his annual balance sheet and invoice if he wishes to know the nature and extent of his profits and losses, his condition at the end of the year and what expenditures are most advisable for the ensuing year.

VIII.

SOME ILLUSTRATIONS.

Vital statistics become therefore of the very first importance in discovering the existence of dangerous unsanitary conditions in our cities, especially in tenement house districts and in the various industrial pursuits. Numerous illustrations of the efficiency of vital statistics in bringing about much needed reforms in industry and social conditions might be given. Three incidents may be noted in passing.

When the agitation for national legislation requiring self couplers and safety appliances on railroad cars began about 1885, Mr. L. S. Coffin, then one of Iowa's Railroad Commissioners and the prime mover and ever the head and front of that great reform, was unable to arouse public interest in the subject until he presented the statistics of losses. Not even the brotherhoods of railroad trainmen had any conception of the enormous magnitude of the frightful accidents and fatalities then annually occurring and due to the existing methods of handling and hauling cars. Mr. Coffin has recently told us his own astonishment when he first computed the losses of limb and of life. They were so great that he was afraid to publish his figures lest the public would pronounce him a visionary, and such was the first verdict of experts as well as of the public generally. But when statistics began to be gathered by his critics, they themselves were dumfounded because their own returns exceeded the totals Mr. Coffin had ventured to give out. The public became immediately alive to the necessity of radical reform and aggressively urged it until reluctant congressmen were compelled to enact suitable legislation to abolish the conditions that produced such an immense and needless loss of life or entailed life-long suffering and want*

In 1892 and 1893 the people of New York heard rumors that the death rate among infants in that city was increasing greatly among the poor. During the summer charges were frequently made that the milk supply of the city was chiefly responsible for the increase. As usual, people heard and heeded not. One man, however, Mr. Nathan Straus, became convinced that the charges were generally well founded, and he undertook in 1894 to supply pure or sterilized milk at cost or less to the mothers of infants. He described the conditions in New York, and his expose of the death rate, compiled from the city's bureau of statistics, made the whole country shudder. Here are his words: "Within a radius of twelve miles from the New York city hall, three children die during the heated term for every adult; and certainly two out of every three represent a sacrifice which is a disgrace to our civilization to allow. Within the area of what may be called the metropolitan district, the record of one week shows the total mortality to be 1,038, of which 713 deaths were under five years, 664 under two years, 529 under one year, and only 325 over five years of age. Here was 64 per cent of one week's death roll composed of babies under

*Mr. L. S. Coffin gives an extremely interesting account of this reform in his article, "Safety Appliances on the Railroads." *Annals of Iowa*, January, 1903.

two years, who drank but little water and were almost wholly dependent on milk for their nutriment."*

Mr. Straus' notable philanthropic experiment was amply justified. For notwithstanding the excessively warm weather of 1894, much more intense and severe than in 1893, the death rate was materially reduced from an increase of ten per cent in the first quarter of the year to a decrease of ten per cent for the third quarter.† His work was a great factor in arousing the people of New York to a realization of the dangerous sanitary condition existing in the tenement house districts and in energizing the voters with a determination to eradicate or reduce such unsanitary conditions. The recent tenement house legislation of New York is due in no small degree to Mr. Straus' exposures.

In 1875 the death rate in the city of Birmingham, England, became alarmingly high. In some localities the number reached 60 to 80 per 1,000, and the average for the city was 26. The death returns demonstrated that radical reforms in sanitation were a crying need and vigorous measures were forthwith instituted through the health department of that municipality. Some 3,000 wells used by 60,000 people were found contaminated by sewage, and breeders of disease and plague. They were condemned and closed. A general renovation was enforced throughout the city and in short order the city's deaths declined to 20 or less per 1,000, a saving of human life each year of 2,000 to 2,500 persons.‡

Probably the greatest triumph that vital statistics have to exhibit is the decline in the death rate in England pursuant to the passage of the Public Health Act in 1875. The decrease in the deaths due to diseases caused by defective drainage and impure water between 1866 and 1889 was phenomenal. Those due to typhoid decreased 57 per cent. From 1866 to 1875 the average annual mortality was 22.19 per 1,000 while, from 1880 to 1889 it was 19.08. The rate in 1889 was 17.9 per 1,000, as compared with 23.4 in 1866, a decline of 23.5 per cent in fourteen years.§

Such results meant not merely the saving of life; they meant the enhancing of life, the lessening of suffering, misery and want, the increase of enjoyment and greater length of life. While it meant immediate and apparent greater or less outlays of public revenues to provide better water supplies, better drainage and sewage disposal; it also meant untold sums saved to the working men's families in doctors' bills and a universal reduction in the cost of living throughout the United Kingdom.||

* See Mr. Straus' article "How the New York Death Rate was Reduced" in Forum Vol. XVIII, p. 342.

† *Ibid.*, pp. 345, 376.

‡ See Shaw's Municipal Government in Great Britain, p. 185.

§ Publications of Am. Statistical Association. Vol. II, pp. 297-299.

|| *Ibid.*, 298-303.

IX.

THE VALUE OF VITAL STATISTICS TO THE PHYSICIAN.

If a layman may, without gross presumption, venture within the precincts of the medical profession, experience surely warrants the assertion that physicians have a decided interest in vital statistics, not simply as citizens and taxpayers concerned with the efficiency of government and the welfare of society, but as professional practitioners. The grounds for this assertion are: (1) The relations of physicians to the public and (2) the practical value of such statistical data to practitioners and students of medicine and hygiene.

The condition of the public health is charged, more or less, to the medical profession. The popular judgment is often ill-founded, irrational and unjust, yet in the main the public is justified in their general opinion. It is with the public as with private patients. The public may expect not only to be cured of a particular ailment or disease, but it expects its physicians to point out causes and conditions producing disorders and to indicate and to insist upon a reformative regimen that will prevent their recurrence. This expectation of the public arises not merely from humanitarian sentiment, but from the legal and professional obligations of physicians. Our laws for years have laid special burdens upon the medical profession, with a view to the protection of the public against dread diseases, contagious and infectious, and if practitioners do not exercise due diligence in warning and safeguarding a community and suppressing such diseases they may be subjected to the pains and penalties of the law. Moreover, schools, colleges, hospitals and universities are maintained and endowed by generous, public-spirited citizens, or they are supported by taxation for the express purpose of training physicians for their work and, in addition, the state, by restrictive regulations, confines the practice of medicine, for the most part, within the licensed profession. In return for these benefits the public may properly look to the medical profession for knowledge of disease and guidance in preventive measures as well as for remedial action.

From the nature of the case the fulfillment of this duty to the public must consist mainly in popular education in sanitation and hygiene. Physicians cannot make people strong and healthy if they persist in living in conditions that produce morbidity. But despite this fact, it is the duty of practicing physicians constantly to study these conditions, to expose them and to press for their eradication, so far as can be done through public agencies. In order to perform this duty effectively it is essential that the medical profession know not only what unsanitary conditions exist and what diseases are traceable to their existence, but the profession must needs know the aggregate of diseases, accident and deaths and their direct and contributory causes, and have such knowledge in such wise that they can present it to the public and readily impress its lessons upon the public mind. For reasons previously set forth* physicians will be able

* See Ante, pp. 20-21.

to secure public attention and enforce their recommendations chiefly when some epidemic works widespread suffering and havoc or when they can exhibit the mass of disease and the results in a community. A large proportion of the serious ailments or diseases that afflict mankind are not sudden, violent or sensational in their manifestations, but unobtrusive, quiet and insidious in their progress. Warnings from individual cases avail but little toward arousing the public to a realization of the dangers lurking in a community. There is practically but one way by which the physician can enforce the lessons of sanitary science and that is by the extensive, systematic and continuous collection of properly classified vital statistics. With these in hand it is practicable to determine with considerable assurance the character of the sanitary conditions of a city or district, the success or failure of the administration of its health department and the peculiar and pressing needs in the way of reformative and protective measures. Responsibility and accountability can thus be rendered clear; and both the public and the medical profession are the gainers.

But vital statistics have a value for physicians other than as a quantitative measure of the prevalence of disease in a community, of its amount and variety. They constitute an important means for the discovery of causes and conditions producing disease and often have proven to be the main reliance in the determination of the location of the specific causes of epidemics. From the nature of modern urban life the possibilities of infection are infinite and the dangers are always imminent. People are massed within small areas. They obtain their water, ice and milk supplies mainly from common sources. They depend on a common sewerage system. As water and milk become under city conditions the common carriers of virulent disease germs any contamination of urban food supplies or stoppage, perversion or defect in the system for the disposal of waste matter immediately affects hundreds and thousands. The dejecta from one diseased person if emptied into the water basin of a city can with appalling rapidity infect the entire water supply and a city is at once in jeopardy. Because of this solidarity of city life the need of facilities for quickly collecting and studying the health returns of cities becomes imperatively urgent. If the health authorities and physicians of an afflicted city can make ready use of a large body of reliable vital statistics the chances for the speedy discovery of the causes of infection and their suppression are increased many fold. One cannot read the history of epidemics that have wrought great havoc among the inhabitants of cities without being greatly impressed with the practical value of vital statistics.

Various interesting illustrations of the practical use made of vital statistics in the location of the causes of infection and epidemics might be cited. One of the most instructive instances was the discovery of the origin of the Asiatic cholera that broke out so violently and fatally in the Parish of St. James, Westminster (London), in 1854. At the beginning Dr. John Snow secured from the general registrar's office the number, date and location of the fatal cases for each of the sub-districts within and about the locality afflicted for the month of September. He also made a map of the areas and made a study of the cases in relation to the location of pumps and wells in the several districts. After extensive investiga-

tions and comparisons he was forced to the conclusion that a particular pump or well, the water of which had a great reputation had been infected. Dr. Snow's various statistical exhibits compelled general concurrence in his view; and the cessation of the use of the "Broad Street Pump," as it was called, stopped the epidemic. Independently of Dr. Snow, Rev. H. Whitehead conducted an instructive investigation seeking the cause of the well's infection and it was a careful study of the statistics of the epidemic that gave him his first clues that led to his startling conclusions and a subsequent investigation by the authorities confirmed his deductions.* A striking illustration of the practical value of vital statistics to physicians and health authorities in locating the origin of infection is afforded in the experience of Lowell and Lawrence, Massachusetts, with an epidemic of typhoid fever in 1890-91. These cities are located on the Merrimac river from which their water supply was obtained. The death returns of Concord, Manchester and Nashua in New Hampshire, and of Haverhill and Newburyport in Massachusetts, all located on the same river indicated some astonishing differences in the prevalence of typhoid in those cities as compared with Lowell and Lawrence. Yet they enjoyed similar conditions of climate and industrial life, with the exception that the latter secured their water supply from the Merrimac. An extended study of the health returns by months and years before and after the outbreak made by Prof. Wm. T. Sedgwick and others developed some extremely important facts. The first was that the main cause of the outbreak in Lowell in 1890 was contamination of the river by the outflow from a suburb of that city of a little feeder, known as Stony Brook which contained in sewage typhoid germs in dejecta from a fever infected neighborhood; the second, that Lawrence and Lowell had suffered annually from two autumnal increments of typhoid fever, the second one being due to the contamination of the river by the sewage from the upper towns.†

Within the past year or two several cities of Iowa have suffered seriously from ravages of typhoid fever, notably Fort Dodge and Marshalltown. Up to the present time there seems to have been no satisfactory progress towards the discovery of the origin of the epidemics in either city.‡ It does not seem extravagant to presume that if the authorities possessed extensive and thoroughly classified health and death returns from the several wards of each city and of every community whence their water or milk supplies might possibly have been contaminated, the location and nature of the cause would have been conclusively demonstrated long ere this. If each case reported could be studied with reference to the use of private wells or city water, with respect to cesspools and private vaults or modern closets, plumbing and sewerage mains, with reference to the ice and its sources of supply, with regard to the milk consumed whether from private sources or general sources and the conditions surrounding such sources; if the results of all these could be compared with each other in the light of the health returns of those cities it is not rash

* See Sedgwick's *Principles of Sanitary Science and the Public Health*, pp. 170-182.

† See Report of State Board of Health of Mass., 1890, paper by H. F. Mills on "Typhoid Fever in its Relation to Water Supplies," pp. 525-518; also report for 1892, for investigation of Prof. Sedgwick. The statistics and reports of the cases are summarized in Sedgwick's *Principles of Sanitary Science*, pp. 207-214.

‡ See "Times-Republican" of Marshalltown, May 23, 1903.

surely to venture the assertion that any well trained sanitary expert would be able soon by process of elimination to locate the source of the contamination with assurance and if doubt lingered the bacteriologist and chemist could speedily determine definitely.

But vital statistics are valuable aids in the discovery of the symptoms and nature of diseases and in the discovery of the character of the germs of bacilla producing particular diseases.

The marvelous progress of modern medicine has been due in large measure to a study of vital statistics collected in hospitals and clinics. Careful and more or less minute records are maintained of all serious cases brought to them. An account is kept of the patient's temperature, pulse and respiration and of the action of the digestive and excretory organs under medicine and nourishment from the beginning of treatment, or preceding the crisis, to convalescence or discharge. The occurrence of unusual symptoms, as well as the ordinary pathological manifestations are carefully noted. These records are preserved and their showings are studied and compared by those students who advance the art of healing. In practice, outside hospitals, there is not of course so much care expended in maintaining such records, but in critical cases such is done to a greater or less extent. Sound or safe conclusions are not usually warranted from a few cases, not from a dozen or a score even. Hundreds and sometimes thousands of cases have been studied with laborious care before physicians venture to offer more than mere tentative suggestions and surmises.

The effect of topography or location, of climate, and seasons; of sex, conjugal condition, and age, of race, color, and occupation on health are not matters wholly remote from the sick room and thus of merely academic interest to the practicing physician and surgeon. They are factors of potent influence in the course of ailments and disease and if not always the physician's primary consideration, or the immediate cause producing the trouble or preventing recovery, their bearing upon cases is more or less direct and important, affecting in various ways methods of treatment and the chances of recovery.

In dealing with serious cases of prostration of the digestive, respiratory, vascular, muscular or nervous systems, whether from disease or excessive labors, no physician worthy of the name presumes to prescribe treatment before he has inquired extensively into the history and circumstances of the patient, his previous health and habits of life, the nature of his business, its environment, his age, the character of his parents. Each and all of these and other related matters may have an important bearing upon the causes of the disorder and the conditions of treatment and cure. This information is essential if we would know pathogenesis; and the data should be secured and preserved with the same care that the records of the course of the disease, the effects of medicines and the results of operations are preserved. If these records of cases properly classified are thus kept and through some public channel, are brought together, analyzed and published, showing the returns for localities and for entire corporate areas, for districts and for the state, physicians have a mass of material that is of great practical value to them. They have at their command definite knowledge of the general causes of disease and

ill health in their local fields, and of the probabilities of the course of disease and of the effects of curative measures. In various and incalculable ways, sometimes in a direct fashion but usually in indirect ways, the light from the experience of the entire community points out the way to successful treatment of special cases. The chief gain, however, is the possession of authoritative information as to general causes and conditions producing ill health and mortality so necessary in wise public expenditure for sanitation and suppression of dangerous diseases.

Dr. Geo. H. Simmons, of Chicago, in the presentation of his plan for the reorganization of the state and medical societies* points out the value of vital statistics and the better facilities afforded under the reorganization for "collective investigation": "There is," he says, "a great need of some method by which statistics concerning diseases may be collected. For instance, what are the statistics of the whole country as to deaths following operation and deaths without operation in appendicitis? The experience of 100,000 physicians would be of immense value in helping solve this vexed question. The statistics gathered by a few individuals scattered here and there are practically valueless because they do not cover a sufficient part of the whole. What are the results of glycerinated lymph as compared with the results from the use of dry points? What harmful results have followed the use of one, and what of the other? What are the facts as regards the curative qualities of diphtheritic antitoxin? What are the facts as regards the prevalence of this or of that disease, or of this or of that complication in certain ailments? There ought to be a way to get these questions answered in such a manner that there could be no possible excuse for guessing, or for depending upon any one's opinion. The scientific facts derived from a collective investigation covering the experience of a very large number of physicians would be invaluable."†

But some will protest that it is asking too much of the hardworked practitioner amidst the hurry and press of daily calls to expect him to keep any such minute and elaborate records of his cases and to report them to the public authorities. "Think of the botheration and expense involved," exclaim some. "Hospitals and public institutions can easily maintain such records, but we cannot do it." While at first blush this objections seems serious, a little reflection will indicate that current practice among the profession largely disproves it, and better administration can make this objection almost of no weight whatever. Our laws and ordinances already require and of public necessity must require, physicians to certify answers to various inquiries concerning deceased patients. For all serious cases of disease where a fatal termination is even a remote or not unlikely contingency, such reports would not require any more extensive outlays of time especially where clerks or nurses, as heretofore, can do much of the routine work. This information would be secured in precisely the same way that hospital records and sick room records are now generally made up. The expense of blank forms and of their compilation and publication would be borne by the public treasury. Indeed with a properly equipped Health Bureau in our cities, the bulk of the drudgery of collecting such

* Adopted at the recent meeting of the state society at Sioux City.

† See Simmons's *Organization of the Medical Profession*, p. 6.

vital statistics would be done by persons specially employed for that purpose. The main thing necessary is the realization by the profession that vital statistics are valuable and necessary and a disposition and a determination to aid in their collection for the benefit of the public. Want and experience will reduce the difficulties to an appreciable minimum as the experience of European cities has demonstrated.

Finally the medical profession of Iowa should take the lead in actively promoting a reform in the collection of vital statistics in this state as a matter of professional pride in the achievements of their representatives in this important field of science. It was Dr. Wm. Farr, of England, who laid the foundations of vital statistics in his discussion of the subject in McCulloch's "Dictionary," in 1832, and in his contributions on the causes of death that appeared in the report of the registrar general in 1838. So important was Dr. Farr's work that as late as 1885 the Royal Statistical Society reprinted his studies in five volumes as a fitting recognition of his services to mankind. It was an American physician, Dr. Edward Jarvis, of Dorchester, Mass., who inaugurated the American Statistical Association and for thirty-three years was its honored president. He first urged upon the national authorities the advisability of compiling vital statistics in the federal census, and in 1850 and again in 1860 he had most to do with the collection and analysis of the returns that were secured. On December 4, 1894, speaking in London upon statistical work in the United States before the Royal Statistical Society, Mr. R. P. Porter, director of the eleventh census, said of a distinguished member of the American profession: "Today the personality of Dr. Billings has alone kept us from disgrace in this important part of statistical work" [viz: Vitals Statistics]. To another member of the medical profession is to be given great credit for the vital statistics in the census of 1900. At the meeting of the American Public Health Association in Denver, in 1895, Dr. C. L. Wilber, the head of this work in the State department of Michigan, demonstrated the great need of reforms in our methods of registration and again in 1897 in the publications of the American Statistical Association he presented the subject in such a manner as to attract widespread interest that largely brought about the extensive and successful preparations for vital statistics in the last census. Dr. Wilbur has achieved fame for his state by his thoroughgoing work in advancing this science in Michigan.

The medical profession of Iowa should emulate their co-workers in other states and not only give countenance to this important public work, but aid actively in pushing forward reforms in the methods of collecting, preserving and publishing vital statistics.

XI.

SUGGESTED REFORMS IN METHODS OF REGISTRATION.

In view of what has been shown it will, doubtless, be conceded that vital statistics are of no little importance to the inhabitants of Iowa's cities. It must be clear that some reforms should be instituted with a view both to the enforcement of existing statutory provisions respecting the registration of births, disease and deaths and to improvements in the methods of collecting and preparing the returns for the use of administrative officers and the public. The present negligent practices and inadequate registration are expensive. In the first place, the work done is neither complete nor accurate, and the returns cannot be relied upon for absolute conclusions as to actual conditions. This is a sad waste of money collected through taxation. Furthermore, there is no adequate provision made for the compilation and publication of the returns actually made. So that even if they were reliable they would be of little use because unavailable. It is not within the writer's purpose to outline in detail what these reforms should be. He ventures only a few suggestions.

Obviously there must be a marked change in the manner of executing existing laws and regulations and in the attitude of the medical profession of Iowa towards the existing statutes; else, be the legislative reforms what they may, the best results will be unattainable. In order to promote this co-operation of the medical profession the mere drudgery of collection of most of the desired data should be done by public clerks under the direction of the health departments of the cities. Further, in cases where there is sensitiveness on the part of physicians regarding the disclosure of causes of death or illness in special cases, safeguards should be provided to protect the practitioner and the parties concerned, when the information is given the health department such as, for instance, those adopted by the Federal Statistical Bureau of Switzerland.* There is good reason, too, for relieving physicians of the work of certifying more than causes of death. The undertaker should be required to secure from such sources as may be accessible, the age, occupation, ancestry, etc., of the person deceased of whom he takes charge. In practice he does perform this work. He should be given authority and power to do so and be charged with the responsibility of reporting the death to the health department subject to a penalty for failure. Physicians should, of course, be required, as now, to certify the causes of death and the attendant circumstances.

The most needed reform is the enforcement of the existing law requiring the physician's certificate to be made immediately after death and the filing of the same with the city clerk before a burial permit is issued. This is of paramount importance. The value of mortality returns depends largely upon their prompt return subsequent to death; and this return should not be later than interment. Information secured later is invariably less accurate because gathered in a listless, haphazard fashion that does not insure accuracy and completeness.

* See Publications of American Statistical Association (new series), Vol. 5, p. 174.

Our experience in Iowa demonstrates conclusively that it is a waste of time and revenue to expect satisfactory returns of birth or deaths from local assessors. There is but one way to get accurate and complete returns. The entire work of collection and reporting should be put under local health officers, who shall be under the direction and supervision of a state board or registrar, who shall have power to inflict adequate penalties for negligence or refusal to perform their duty. But whether this is deemed feasible or not for small towns and cities there is little question that in cities having a population approximating 10,000 and over it would seem to be necessary, at least administrative theory and experience declare it advisable, to recognize the work and concentrate all matters pertaining to health and vital statistics in one bureau, over which the chief health officer presides, who shall be given power and responsibility for the conduct of the work and be held strictly to account. In the average city of 10,000 the city clerk is an officer concerned with too many distracting duties, clerical and political, for him to have either the time or inclination to look after the registration of births and deaths with the diligence needed or to be able to compile and analyze the returns and present them to the public in the most advantageous manner. This work demands and is worthy of expert ability and medical or statistical training and continuous and concentrated attention on the part of those in charge of it.

All of these suggestions imply that the health departments of our cities shall be increased in their powers and efficiency and in the reputation they sustain in public esteem. They must command the respect and confidence of the medical profession. This great desideratum is to be secured chiefly by removing the work of our health departments and the appointment of their chiefs and assistants as far as possible from the storms and stress of politics. So long as they remain a part of the "spoils" of political parties or factions their work will not be up to the standard of the health bureaus of Europe, and of the best registration in this country.

The recent establishment of a permanent census bureau by Congress will mean more systematic and extensive efforts on the part of the national statisticians to improve the quality and quantity of vital statistics in the non-registration areas as well as in the states with fairly efficient registration. They will seek to enlist the co-operation of the local authorities in the furtherance of their work. There should be active and constant co-operation with the new bureau on the part of our cities. The benefits resulting will amply repay all expenditure of revenue and effort.*

We, as citizens of Iowa, are interested not only in the returns of our own cities, but we are almost equally interested in the returns of health and mortality in other states. In these days of easy communication and transportation, disease germs are easily carried about the country. Our commercial development has brought every city into almost intimate, neighborly relations with cities more or less remote from the borders of

*Since the above paragraph was written congress has passed a resolution asking the co-operation of state authorities with the national census office in the promotion of uniform registration laws and practice. The writer has received from Mr. W. A. King, chief statistician in charge of Vital Statistics, his circular on "Legislative Requirements for Registration of Vital Statistics," containing the resolution, the report of the house committee on the matter, the report of the committee of the public health association, and a draft of a law covering the various reforms urged. It is a very instructive and serviceable pamphlet that no doubt will be sent to any one on application.

our state. It is not infrequent that the bars of quarantine must be erected against contagious disease or contaminating sewage or drainage by cities of one state against the traffic and people of the cities of another state. Their vital statistics, consequently, have a great practical value to the inhabitants of our cities, since from their health bureaus we may obtain warning of coming contagion. The same, of course, would be true as regards the value of our health returns to the authorities of cities in our sister states. For these and many other reasons it is to be hoped that the National Census Bureau can secure the heartiest co-operation of Iowa's health officers in the perfection of the returns of marriages, births, disease and deaths.

If objection is made that these reforms involve expense and the people have all the burdens they can well bear up under now, the answer is that with a re-organization of the work as suggested, the present work that is now but partially done could be done thoroughly, and satisfactorily done with but little if any additional outlay. But is it profitable to be too economical in determining this matter. Des Moines had an experience in 1901-1902 with smallpox that cost the merchants of the capital city of Iowa in loss of trade and injury to the reputation of the city ten times, yea, fifty times over (to say nothing of the cost to the afflicted in doctors' bills, loss of wages, etc.), what it would cost to establish, equip and maintain for the next ten years, a first-class health department and bureau of statistics, such as scores of cities of Europe have. In 1885 Plymouth, Pa., had a violent outbreak of typhoid fever, with 114 deaths. Dr. M. S. French, of Philadelphia, made an estimate of its cost. The actual outlay he found to be \$67,100.17. The loss of earnings of those ill and recovering he estimated at \$30,020.08, and the loss of income of those dying at \$18,419.52 annually. As Professor Sedgwick points out, he did not capitalize the latter amount and add it to the gross loss. This would have shown the pecuniary loss sustained by the people of Plymouth to be close on a half million dollars.* The people of Fort Dodge and Marshalltown have suffered similar losses in the past year, not so much in the aggregate, perhaps, but sufficient to demonstrate that the careful collection and analysis of their health returns would have been profitable investments. There is sometimes economy that is not economy, for it is penny wise and pound foolish.

*See First Annual Report of State Board of Health and Vital Statistics of Pennsylvania. (1886), p. 196-217. See also Sedgwick, Op. Cit. p. 266.

GRADED WAGES AND SALARIES.

WITH HOURS WORKED BY DAY AND WEEK—BY SEX.

The statistics presented in this section is a new departure, and is intended to partially supply a continuous demand that is made upon this Bureau.

It is compiled and alphabetically arranged by counties, industries, and division of occupation. .

In this table provision is made to show maximum, medium and minimum wages paid, either by hour, day, week, month, or year, as collected; in some cases, however, only one rate is shown where only one person is employed at some particular occupation or where only one rate is paid.

The number of hours worked per day and week is also shown together with the sex employed.

This wage table is compiled in the most simple form that can be devised and is intended to readily convey the information that may be desired, no section of the table and no individual record is based upon a so-called average which is often deceptive.

The exact data in regard to wages paid is clearly stated, and it is believed that this plan will prove more satisfactory than the ordinary complicated wage tables based on average daily, weekly, or yearly earnings.

This table embraces statistics from eighteen counties, and was personally collected in connection with the work of factory inspection.

It is to be regretted that a complete report could not be furnished for each county and industry in the state, but all that could be done with the limited working force of the Bureau has been accomplished.

Naturally some objections were made to supplying information regarding wage rates, that being deemed of a private nature, and in some cases employers were fearful of results from making public the rate of wages paid in their locality. However, the method of presentation in the table has been so designed as to avoid disclosing the identity of any establishment in accordance with the provisions of section 2475 of the Code, but the advantage of a general knowledge of this item of expense in production will prove of such benefit that it is confidently believed the report will very materially assist in the further development of manufacturing and producing plants within the state.

Among the first questions asked by prospective investors along manufacturing lines is, "What is the price of labor in the community?" and, "Is there a plentiful supply?" The Commissioner has exerted himself during this inquiry to show the soundness of the business proposition that secrecy along this line should be abolished, and that it is beneficial for employers as well as employes to know the exact wage rate as easily as the market quotation of products.

There are two advantages that this table offers, one is the accurate information to an employer of the cost of labor in any other locality within the state. The second is that it will assist in securing and maintaining a uniformity of wages throughout the state of each industry, it will also provide a means that may materially assist in the settlement of wage disputes thereby proving a great benefit to employer and employe.

GRADED WAGES AND SALARIES WITH HOURS WORKED BY DAY OR WEEK.

COLLECTED FROM EMPLOYERS IN IOWA.

APPANOOSE COUNTY.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Brick and Tile Manufacturing—</i>						
*Brick makers.....	M	d \$ 1.75		d \$ 1.57	9	54
*Engineer.....	M	d 1.75			9	54
*Fireman.....	M	d 2.25			9	54
*Foreman.....	M	d 2.75			9	54
*Superintendent.....	M		d \$ 1.50		9	54
*Yardmen (helpers).....	M					
<i>Street Railway—</i>						
*Brick layers.....	M	d 4.50			10	60
Engineer.....	M	m 60.00		m 50.00	12	84
Firemen.....	M	m 45.00		m 40.00	12	84
Hod carriers.....	M	d 1.75			10	60
Linemen.....	M	d 2.00		d 1.75	10	60
Motormen.....	M	h .12	h .11	h .10	12	84
Ma hinist.....	M	d 2.50			10	60
Trackmen.....	M	d 1.75	d 1.60	d 1.50	10	60

BLACK HAWK COUNTY.

<i>Boiler Mfg. (Contract Shops)—</i>						
Boiler makers.....	M	w 18.00		w 15.00	10	60
Helpers.....	M	w 12.00		w 10.00	10	60
Riveters.....	M	w 12.00		w 10.00	10	60
<i>Bottling Works—</i>						
Bookkeeper.....	F	w 5.00			10	60
Bottlers.....	M	d 1.50		d 1.25	10	60
Foreman.....	M	w 12.00			10	60
Salesman.....	M	w 12.00			10	60
Teamster.....	M	w 10.00			10	60
<i>Broom Manufacturing—</i>						
Boys 16 years.....	M	w 5.00			10	60
Boys 14 years.....	M	w 3.50			10	60
Broom makers.....	M	w 18.00		w 12.00	10	60
Handy men.....	M	w 10.00			10	60
Salesman.....	M	m 50.00			10	60
Stitchers.....	M	w 9.00			10	60

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

BLACK HAWK COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
Canning—						
Bookkeeper.....	M	y \$1,800.00		y \$ 600 00	12	72
Engineer.....	M	h 20			12	72
Fireman.....	M	h 20			12	72
Foreman.....	M	h 25	h \$.20		12	72
Girls.....	F	h 10			12	72
Men.....	M	h 20	h 17½	h .15	12	72
Stenographer.....	F	m 45.00			12	72
Cigar Manufacturing—						
Bookkeeper.....	F	w 8.00			9	54
Cigar makers.....	M	w 18 50	w 15.00	w 12.00	9	54
Cigar makers.....	F	w 12.00	w 10.00	w 6.50	9	54
Foreman.....	M	w 25.00			9	54
Strippers.....	M	w 6 00		w 1.50	9	54
Cigar Manufacturing—						
Bookkeepers.....	F	d 1.00			10	60
Cigar makers.....	M	w 20.00		w 10.00	10	60
Cigar makers.....	F	w 6 00			10	60
Foreman.....	M	w 18.00			10	60
Packers.....	M	d 1.50			10	60
Salesman.....	M	m 70 00		m 50.00	10	60
Strippers.....	M-F	d 1.00			10	60
Confectionery Manufacturing—						
Candy maker.....	M	w 15.00			10	60
Candy packers.....	F	w 2.50			10	60
Chocolate dipper.....	F	w 10 00	w 8.00	w 7.00	10	60
Engineer.....	M	w 12.00			12	75
Foreman.....	M	w 16.00			10	60
Salesman.....	M	m 75.00		m 50.00	10	60
Shipping clerk.....	M	w 12.00		w 8.00	10	60
Superintendent.....	M	w 25.00			10	60
Time and bookkeeper.....	F	w 7.50			10	60
Creamery Supplies—						
Bill clerk.....	M	m 70.00			10	60
Bookkeeper.....	M	m 60.00			10	60
Foreman.....	M	y 1,200.00			10	60
*Machinists.....	M	d 3.70	d 3.25		10	60
Machinists' helper.....	M	d 1.70			10	60
Manager.....	M	y 3,000.00			10	60
Stenographer.....	F	m 40.00			10	60
Teamster.....	M	m 50.00			12	75
Creamery Separator Mfg.—						
Bookkeeper.....	M	w 10.00			10	60
Foreman.....	M	w 18.00			10	60
Handy men.....	M	d 1.75	d 1.50	d 1.00	10	60
Machinists.....	M	d 2.75	d 2.25	d 2.00	10	60
Painters.....	M	d 2.50		d 1.50	10	60
Salesmen.....	M	m 100.00	m 80.00	m 60.00	10	60
Stenographer.....	F	w 10.00			10	60
Superintendent.....	M	w 32.00			10	60
Electric Light—						
Engineers.....	M	m 75.00			12	84
Firemen.....	M	m 50.00			12	84
General manager.....	M	m 150.00			12	84
Helpers.....	M	m 60.00			12	84
Stokers.....	M	m 60.00			12	84
Superintendent.....	M	m 150.00			12	84

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

BLACK HAWK COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Gas Engine Mfg.—</i>						
Assembly men.....	M	d \$ 1 00			10	60
Blacksmiths.....	M	d 2.50			10	60
Bookkeeper.....	M	m 60.00			10	60
Coremaker.....	M	d 2.25		d \$ 1.25	10	60
Foremen.....	M	m 100.00	m \$ 90.00		10	60
General manager.....	M	m 100.00			10	60
Laborers.....	M	d 1.50			10	60
Machinists.....	M	d 3 00	d 2.50	d 2.25	10	60
Machinists' helpers.....	M	d 2.00	d 1.75		10	60
Molders.....	M	w 21.00			10	60
Molders' helpers.....	M	w 9.00			10	60
Painters.....	M	d 2.50		d 1.75	10	60
Pattern makers.....	M	m 83 33			10	60
Salesmen.....	M	m 100.00			10	60
Secretary and treasurer.....	M	m 100.00			10	60
Superintendent.....	M	m 100.00			10	60
Tool boy.....	M	d .75			10	60
<i>Gas Engine Mfg.—</i>						
Bookkeeper.....	F	y 400.00			10	60
Foremen.....	M	m 78.00	m 75.00		10	60
Machinists.....	M	d 2.50		d 2.00	10	60
Machinists' helpers.....	M	d 1.50			10	60
Machinists' apprentices.....	M	d 1.00			10	60
Manager.....	M	m 75.00			10	60
Molders.....	M	d 2.50	d 2 25		10	60
Painters.....	M	d 2.50			10	60
Pattern maker.....	M	d 2.50			10	60
Superintendent.....	M	m 75.00			10	60
<i>Grinders and Steam Heater Mfg.—</i>						
Blacksmith.....	M	d 2.50			10	60
Bookkeeper.....	M	m 50.00		m 35.00	10	60
Clerk.....	M	w 7 00			10	60
Foreman.....	M	m 72.00			10	60
Laborers.....	M	w 10.50			10	60
Manager.....	M	y 1,800.00			10	60
Molders.....	M	d 2.50			10	60
Painters.....	M	w 9 00			10	60
Superintendent.....	M	m 60.00			10	60
<i>Harness and Saddlery Mfg.—</i>						
Bookkeeper.....	F	y 400.00			10	60
Foreman.....	M	w 18.00			10	60
General manager.....	M	m 125.00			10	60
Harness makers.....	M	w 12.50		w 8.50	10	60
Salesmen.....	M	m 90.00		m 50.00	10	60
Secretary and treasurer.....	M	y 1,000.00			10	60
Shipping Clerk.....	M	m 40.00			10	60
<i>Harness and Saddlery Mfg.—</i>						
Bookkeeper.....	M	m 75.00			10	60
Clerk.....	F	m 40.00			8	48
*Cutters.....	M	w 18.00	w 13.50		10	60
*Foreman.....	M	w 18.00	w 15.00		10	60
*Harness makers.....	M	w 13.00			10	60
*Horse collar makers.....	M	w 13.00			10	60
*Machine operators.....	M	w 15.00	w 12.00		10	60
Superintendent.....	M	y 1,100.00			10	60

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

BLACK HAWK COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
Mattress Mfg.—						
Laborers.....	M	d \$ 1.00			10	60
President.....	M	y 600.00			10	60
Sale-man.....	M	y 600.00			10	60
Seamstress girls.....	F	w 5.00			10	60
Stitchers.....	M	d 2.50			10	60
Packing House—						
Bookkeeper.....	M	y 1,500.00				
Butchers.....	M	d 2.00		d \$ 1.50	10	60
Clerk.....	F	w 8.00			10	60
Engineers.....	M	m 55.00			12	75
Firemen.....	M	m 45.00			10	60
Foremen.....	M	d 2.25			10	60
Hog inspector.....	M	m 50.00			10	60
Manager.....	M	y 1,500.00			10	60
Salesman.....	M	m 75.00	m \$ 65.00	m 60.00	10	60
Shipping clerk.....	M	m 45.00			10	60
Stenographer.....	F	w 6.50			10	60
Refrigerator Mfg.—						
Bookkeepers.....	M	m 100.00			10	60
Carpenters.....	M	d 2.50	d 2.25	d 2.00	10	60
Enamellers.....	M	d 2.50			10	60
Engineer.....	M	d 2.75			12	75
Foreman.....	M	d 3.50			10	60
Lumber handlers.....	M	d 1.75			10	60
Painters.....	M	d 2.50			10	60
Salesman (traveling).....	M	m 100.00			10	60
Shipping clerk.....	M	m 75.00			10	60
Stenographers.....	F	w 7.50	w 6.00		10	60
Newspaper—						
*Foreman.....	M	w 15.00			9	54
Mallers.....	F	w 6.00			8	48
Reporters.....	M	d 2.50			10	60
*Type setters.....	M	d 2.50	d 2.00		9	54
Sash and Door Mfg.—						
Bookkeeper.....	F	m 40.00			10	60
Cabinet makers.....	M	d 2.50			10	60
Carpenters.....	M	d 2.50		d 1.75	10	60
Clerks.....	M	m 60.00		m 56.00	10	60
Designer.....	M	y 1,800.00			10	60
Engineer.....	M	m 50.00			12	75
Foreman.....	M	y 1,000.00			10	60
Machine men.....	M	d 4.00	d 2.50	d 1.75	10	60
Painters (finishers).....	M	d 2.00			10	60
President.....	M	y 1,800.00			10	60
Sale-man (traveling).....	M	y 1,200.00			10	60
Secretary.....	M	y 1,000.00			10	60
Stenographer.....	F	m 40.00			10	60
Teamster.....	M	d 1.50			10	60
Skirt Mfg.—						
Bookkeeper.....	F	w 8.00			9	54
Cutters.....	M	w 9.00			9	54
Foreman.....	M	m 75.00			9	54
Sale-man (traveling).....	M	m 65.00	m 45.00		9	54
Seamstress.....	F	w 8.00			9	54
Superintendent.....	M	m 100.00			9	54
Timekeeper.....	M	w 9.00			9	54

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

BLACK HAWK COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Steel Tanks and Pipe Mfg.—</i>						
Bookkeeper.....	F	w \$ 9.00			10	60
Foreman.....	M	w 18.50			10	60
Manager.....	M	m 75.00			10	60
Metal workers.....	M	d 2.00	d \$ 1.75	d \$ 1.50	10	60
<i>Steel Tank and Pipe Mfg.—</i>						
Bookkeeper.....	M	m 60.00			10	60
Foreman.....	M	d 2.50			10	60
Sheet metal workers.....	M	w 10.50			10	60
Superintendent.....	M	d 8.00			10	60
Tinners.....	M	d 2.50			10	60
Tinners' helpers.....	M	d 1.50	d 1.25		10	60
<i>Street Railway—</i>						
Conductors.....	M	h .11	h .10	h .09	14	98
Motormen.....	M	h .11	h .10	h .06	14	98

BOONE COUNTY.

<i>Cigar Mfg.—</i>						
*Cigar makers.....	M	w 15.00	w 12.00	w 8.00	8	48
Strippers.....	M	w 6.00			8	48
<i>Gloves and Mittens Mfg.—</i>						
Bookkeeper.....	F	w 7.50			10	60
*Cutters.....	M	m 75.00			10	60
*Machine operators.....	F	w 6.00	w 4.00		10	60
Superintendent.....	M	m 75.00			10	60
<i>Harness and Collar Mfg.—</i>						
Bookkeeper and manager.....	M	y 1,800.00	y 1,000.00		10	60
Collar maker.....	M	w 14.00	w 18.00	w 11.00	10	60
Cutter.....	M	w 17.00			10	60
Foreman.....	M	w 17.00	w 15.00		10	60
Harness makers.....	M	w 18.50	w 12.00	w 9.50	10	60
Machine operators.....	M	w 16.00			10	60
Salesmen.....	M	m 90.00			10	60
Stenographer.....	F	w 7.00			10	60
<i>Laundry—</i>						
*Bookkeeper.....	F	w 6.00			9	54
*Clerks.....	F	d 1.00			9	54
*Drivers.....	M	w 15.00			9	54
*Engineer.....	M	w 12.00			9	54
*Foreman.....	M	w 15.00			9	54
*Hand ironer.....	F	d 1.00			9	54
*Manglers.....	F	d 1.00			9	54
*Markers.....	F	d 1.00			9	54
*Sorters.....	F	d 1.00			9	54
*Starchers.....	F	d 1.00			9	54
*Superintendent.....	M	m 75.00			9	54

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

CLINTON COUNTY.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Bed Springs and Shovelng Boards Mfg.—</i>						
Bookkeeper.....	M	m \$ 25.00			10	60
Boys.....	M	d .85	d \$.70	d \$.65	10	60
Engineer.....	M	d 1.40			10	60
Foreman.....	M	d 8.00			10	60
Spring weaver.....	M	m 40.00			10	60
Spring maker.....	M	d 1.80	d 1.40	d 1.20	10	60
Teamster.....	M	d 1.40			10	60
<i>Box Shooks Mfg.—</i>						
Bookkeeper.....	M	y 800.00			10	60
Boys.....	M	d .75	d .60		10	60
Cross cutter.....	M	d 1.65	d 1.60		10	60
Engineer.....	M	m 70.00			10	60
Filer.....	M	m 65.00			10	60
Fireman.....	M	d 1.50			10	60
Foreman.....	M	m 75.00			10	60
Laborers.....	M	d 1.50			10	60
Machine men.....	M	d 1.85			10	60
Matcher men.....	M	d 1.75			10	60
Surfacers.....	M	d 1.80			10	60
Timekeeper.....	F	y 600.00			10	60
<i>Bridge Material Mfg.—</i>						
Bookkeeper.....	M	m 150.00			10	60
Blacksmith.....	M	d 3.50			10	60
Engineer.....	M	d 2.50			10	60
Foreman.....	M	d 8.75	d 3.50	d 2.75	10	60
Handy men.....	M	d 2.50	d 2.00		10	60
Heaters.....	M	d 1.50			10	60
Helpers.....	M	d 1.50			10	60
Laborers.....	M	d 1.70	d 1.50	d 1.40	10	60
Riveters.....	M	d 2.00			10	60
Salesmen.....	M	m 150.00	m 100.00	m 75.00	10	60
Stenographer.....	F	m 40.00			10	60
Template makers.....	M	d 8.00	d 2.50	d 2.00	10	60
Yard men.....	M	d 2.00			10	60
<i>Building Paper Mfg.—</i>						
Beat rmen.....	M	d 2.25			10	60
Engineers.....	M	d 2.50			12	75
Firemen.....	M	d 1.75	d 1.50		10	60
Foreman.....	M	w 12.00			10	60
Helpers.....	M	d 1.50	d 1.25		10	60
Laborers.....	M	d 1.50			10	60
Machine men.....	M	d 3.00	d 2.50		10	60
Shipping clerk.....	M	w 7.00			10	60
Sorters (rag).....	F	w 7.00	w 5.00	w 4.00	10	60
Superintendent.....	M	m 100.00			10	60
<i>Cigar Mfg.—</i>						
*Cigar makers.....	M	w 18.00	w 15.00	w 12.00	8	48
*Foreman.....	M	w 18.00			8	48
*Strippers.....	F & M	w 5.00	w 4.00	w 3.00	8	48

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

CLINTON COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Crackers and Biscuit Mfg.—</i>						
Bookkeeper	M	y \$1,100.00			10	60
Clerk	M	w 12.00			10	60
Engineer	M	d 2.25			12	75
Form maker	M	d 8.00			10	60
Helpers	M	w 9.00	w \$ 5.00	w \$ 4.00	10	60
Labelers	M	w 6.00	w 4.50	w 3.00	10	60
Mixers	M	d 2.25			10	60
Packers	F	w 6.00		w 4.00	10	60
Peelers	M	w 18.00			10	60
Salesmen	M	y 1,400.00	y 1,200.00	y 1,000.00	10	60
Superintendent	M	y 8,000.00			10	60
Teamster	M	m 70.00			10	60
<i>Cream Separators Mfg.—</i>						
Bookkeeper	M	m 75.00		m 40.00	10	60
Blacksmith	M	d 2.50			10	60
Carpenters	M	d 8.00	d 2.50		10	60
Clerk	M	m 60.00			10	60
Draughtsman	M	m 75.00			10	60
Foreman	M	m 75.00			10	60
Laborers	M	d 1.50			10	60
Machinists	M	d 3.00	d 2.60		10	60
Machinists' helpers	M	d 1.00			10	60
Painters	M	d 2.50	d 2.25		10	60
Pattern maker	M	d 3.25	d 2.50		10	60
Superintendent	M	m 100.00			10	60
<i>Furniture Mfg.—</i>						
Bookkeeper	F	y 400.00			10	60
Cabinet makers	M	d 2.25			10	60
Carpenters	M	d 2.25			10	60
Engineer	M	m 45.00			12	75
Finishers	M	d 1.50			10	60
Foreman	M	d 2.50			10	60
Machine men	M	d 2.50	d 2.00	d 1.50	10	60
<i>Furniture Mfg.—</i>						
Bookkeeper	M	m 50.00			10	60
Cabinet makers	M	w 15.00	w 12.00		10	60
Engineer	M	m 45.00			12	75
Finishers	M	d 2.00	d 1.80		10	60
Foreman	M	w 18.00			10	60
Helpers	M	d 1.40	d 1.25		10	60
Machine men	M	d 2.25	d 2.00	d 1.50	10	60
Shipping clerk	M	d 2.00			10	60
Superintendent	M	y 1,200.00			10	60
Teamster	M	d 1.50			10	60
Watchman	M	m 45.00			18	91
<i>Harness Mfg.—</i>						
Bookkeeper	M	y 1,200.00			10	60
Foreman	M	w 18.00			10	60
Harness makers	M	w 20.00	w 18.00	w 10.00	10	60
Helpers	M	w 7.50		w 8.50	10	60
Helpers (girls)	F	w 6.00			10	60
Machine operators	M	w 18.00	w 12.00		10	60
Salesmen	M	y 1,900.00	y 1,200.00		10	60
Shipping clerk	M	w 18.00			10	60
Stenographer	F	w 8.00			10	60

GRADED WAGES—CONTINUED.

CLINTON COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week
<i>Sash and Doors Mfg.—</i>						
Bookkeepers.....	M	y \$ 1,000.00			10	60
Carpenters.....	M	d 2.65	d \$ 2.85	d \$ 2.25	10	60
Clerks.....	M	y 900.00			10	60
Engineers.....	M	y 900.00			12	75
Fireman.....	M	d 1.75			10	60
Foreman.....	M	y 900.00			10	60
Glaziers.....	M	d 1.50	d 1.40		10	60
Helpers.....	M	d 1.25	d 1.00	d .50	10	60
Laborers.....	M	d 1.50			10	60
Machine men.....	M	d 1.25	d 1.70	d 1.40	10	60
Salesmen.....	M	y 1,000.00			10	60
Teamsters.....	M	d 1.50	d 1.40		10	60
<i>Skirts Mfg.—</i>						
Cutters.....	M	d 1.50				54
Machine operators.....	F	w 9.00	w 7.00	w 6.00	9	54
<i>Steel Locks Mfg.—</i>						
Bookkeeper.....	M	w 7.50			10	60
Engineer.....	M	w 12.00			12	75
Foreman.....	M	d 8.25	d 8.00	d 2.50	10	60
Girls.....	F	d 1.25	d 1.00	d .80	10	60
Lock fitters.....	M	d 2.25	d 1.75		10	60
Master mechanic.....	M	d 3.50			10	60
Molders.....	M	d 8.00	d 2.50		10	60
Polishers.....	M	d 3.00	d 2.50		10	60
Press hands.....	M	d 1.75	d 1.50	d .75	10	60
Salesmen.....	M	m 125.00	m 100.00		10	60
Stenographer.....	F	w 4.00			10	60
Toolmaker.....	M	d 3.25	d 3.00	d 2.50	10	60
<i>Upholstered Furniture Mfg.—</i>						
Bookkeeper.....	M	m 40.00			10	60
Boys.....	M	d 1.00			10	60
Engineers.....	M	m 45.00			12	75
Finishers.....	M	d 2.00	d 1.75	d 1.50	10	60
Foremen.....	M	d 2.75		d 2.00	10	60
Laborers.....	M	d 1.50			10	60
Machine men.....	M	d 2.25	d 2.00	d 1.75	10	60
Salesmen.....	M	y 1,000.00		y 600.00	10	60
Upholsterers.....	M	d 2.50			10	60
Upholsterers' helpers.....	M	d 1.75	d 1.50	d 1.25	10	60
Timekeepers.....	M	m 30.00			10	60

DES MOINES COUNTY.

<i>Basket and Butter Trays Mfg.—</i>						
Basket makers.....	M	d 2.50	d 1.75	d 1.00	10	60
Basket makers.....	F	d 2.25	d 1.50	d .80	10	60
Bookkeeper.....	M	m 50.00			10	60
Engineer.....	M	d 1.75			12	75
Foreman.....	M	d 2.00			10	60
Manager.....	M	y 1,500.00			10	60
Millwright.....	M	y 950.00			10	60
Salesman.....	M	m 100.00			10	60
Sawyer.....	M	d 1.50			10	60
Stenographer.....	F	w 8.00			10	60
Veneer cutters.....	M	d 1.75			10	60

GRADED WAGES—CONTINUED.

DES MOINES COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D, Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Buttons, Pearl, Mfg.—</i>						
Bookkeeper.....	F	m \$ 75.00			10	80
Button sorters.....	M&F	w 4.00	w \$ 4.00		10	80
Clerks.....	M	w 8.00			10	80
Cutters.....	M	w 15.00	w 12.00	w \$ 8.00	10	80
Drillers.....	M	w 6.00	w 4.00		10	80
Engineers.....	M	w 12.50			12	75
Foremen.....	M	w 15.00	w 12.00	w 10.00	10	80
General manager.....	M	w 25.00			10	80
Grinders.....	M&F	w 5.00	w 3.00		10	80
Machinists.....	M	w 15.00			10	80
Machinists' helpers.....	M	w 8.00			10	80
Shell sorters.....	M	w 10.00			10	80
Superintendent.....	M	w 20.00			10	80
Turners.....	M&F	w 10.00	w 8.00	w 6.00	10	80
<i>Cigars Mfg.—</i>						
*Cigar maker.....	M	w 20.00	w 15.00	w 10.00	8	48
*Clerk.....	M	w 17.00			8	48
*Engineer.....	M	w 10.00			11	66
*Strippers.....	M&F	w 5.00	w 4.00	w 3.50	8	48
<i>Desks Mfg.—</i>						
Bookkeeper.....	M	y \$ 600.00			10	80
Cabin t maker.....	M	d 2.25			10	80
Engineer.....	M	y 720.00			12	75
Finishers.....	M	d 1.60			10	80
Firemen.....	M	m 85.00			10	80
Foremen.....	M	y 900.00			10	80
Laborers.....	M	d 1.35			10	80
Machine men.....	M	d 1.75			10	80
Shipping clerks.....	M	y 500.00			10	80
Stenographer.....	F	m 40.00			10	80
Superintendent.....	M	y 1,200.00			10	80
<i>Engines and Boilers Mfg.—</i>						
Blacksmiths.....	M	d 2.25			10	80
Boiler makers.....	M	d 2.50	d \$ 2.00		10	80
Helpers.....	M	d 1.50			10	80
Machinists.....	M	d 2.50	d 2.80	d \$ 2.00	10	80
Molders.....	M	d 2.50	d 2.25		10	80
<i>Furniture Mfg.—</i>						
Bookkeeper.....	F	m 85.00			10	80
Cabinetmaker.....	M	d 2.25	d 2.00		10	80
Engineer.....	M	d 1.75			13	78
Fitters.....	M	d 2.00			10	80
Foreman.....	M	d 2.00			10	80
Laborers.....	M	d 1.50	d 1.40		10	80
Machine hands.....	M	d 2.25	d 2.00	d 1.50	10	80
Salesman.....	M	y 1,000.00	y 720.00		10	80
Superintendent.....	M	y 1,000.00			10	80
Bookkeepers.....	M	y 1,000.00	y 600.00		10	80
Clerks.....	M	m 20.00	m 15.00		10	80
Foremen.....	M	m 83.38	m 75.00		10	80
Laborers.....	M	w 10.00	w 9.00	w 8.40	10	80
Matress maker.....	M	w 15.00	w 10.00		13	80
Salesmen (traveling).....	M	m 100.00	m 75.00	m 50.00	10	80
Sewing girls.....	F	w 7.50	w 6.50		10	80
Stenographers.....	F	w 12.00	w 9.00		10	80
Superintendent.....	M	m 100.00		m 70.00	10	80
Timekeeper.....	M	m 35.00	m 27.50		10	80
Upholsterers.....	M	w 15.00	w 10.00		10	80
Varnishers.....	M	w 13.00	w 10.00		10	80
Teamsters.....	M	w 9.00			12	75

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

DES MOINES COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Laundry—</i>						
Drivers	M	w \$ 9.00			10	60
Engineers	M	w 9.00			12	75
Hand Ironers	F	w 6.00			10	60
Mangle operators	F	w 8.50			10	60
Markers	F	w 6.00			10	60
Shirt Ironers	F	w 8.00			10	60
Solicitors	M	w 10.00			10	60
Sorters	F	w 7.00			10	60
Starchers	F	w 6.00			10	60
Washman	M	w 10.00			10	60
<i>Sash, Doors and Frames Mfg.—</i>						
Bench men	M	d 2.25			10	60
Engineers	M	w 10.50			12	75
Laborers	M	d 1.75	d \$ 1 50		10	60
Machine men	M	d 2 25			10	60
Superintendent	M	y 1,200.00			10	60
<i>Sash, Doors and Blinds Mfg.—</i>						
Bookkeeper	F	m 40.00			10	60
Boys	M	d .75			10	60
Engineer	M	d 1.50			12	75
Foremen	M	d 2 50			10	60
Moulding man	M	d 2.50			10	60
Salesmen	M	y 900.00			10	60
Teamsters	M	w 10.50			10	60
Woodworkers	M	d 2 25			10	60
<i>Soap Mfg.—</i>						
Bookkeeper	F	m 35.00			9	54
Box nailers	M	d 1.25	d 1.00		9	54
Clerks	M	m 60.00			9	54
Engineers	M	w 10.00			12	72
Shipping clerks	M	w 10.00	w 7.50	w \$ 6.00	9	54
Soap cutters	M	w 10.00	w 9.00		9	54
Soapmakers	M	y 1,000.00	y 600.00		9	54
Soap pressers	M	d 1 25			9	54
Soap wrappers	F	w 8.50			9	54
Stenographers	F	m 35.00	m 15.00		9	54
Watchman	M	m 9.00			12	84
<i>Vehicle Wheels Mfg.—</i>						
Bookkeeper	M	y 720.00			10	60
Engineer	M	d 2 25			12	75
Foreman	M	d 2.50			10	60
Laborers	M	d 1.50			10	60
Machine men	M	d 1.75			10	60
Rim drivers	M	d 2.10	d 2.00	d 1.50	10	60
Riveters	M	d 8.25			10	60
Spoke drivers	M	d 2.75			10	60
Stenographer	F	y 600.00			10	60
Superintendent	M	y 1,200.00			10	60
Watchman	M	d 1.43			12	84

GRADED WAGES—CONTINUED.

DES MOINES COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Vinegar, Pickles, Etc.—</i>						
Bookkeeper.....	M	m \$100.00			10	60
Boys.....	M	d 1.00			10	60
Engineer.....	M	m 45.00			12	75
Foreman.....	M	m 75.00	m \$ 65.00		10	60
Label girls.....	F	w 8.00			10	60
Laborers.....	M	w 10.50	w 9.00		10	60
Pickle bottlers.....	F	w 7.50	w 6.00		10	60
Salesmen (traveling).....	M	y 1,800.00	y 1,200.00	y \$ 900.00	10	60
Stenographer.....	F	m 40.00			10	60
Superintendent.....	M	m 100.00			10	60
Teamster.....	M	w 10.00			12	75
Watchman.....	M	w 9.00			12	84
<i>Wagons Mfg.—</i>						
Blacksmith.....	M	d 2.50	d 2.25	d 2.00	10	60
Blacksmith helpers.....	M	d 1.75	d 1.50		10	60
Bookkeepers.....	M	y 1,100.00			10	60
Engineers.....	M	w 11.00			12	75
Painter.....	M	w 18.00			10	60
Shipping clerk.....	M	w 10.00			10	60
Superintendent.....	M	y 1,100.00			10	60
Teamster.....	M	w 9.00			12	75
Watchman.....	M	w 10.00			12	84
Woodworker.....	M	w 18.00	w 15.00	w 12.00	10	60

DUBUQUE COUNTY.

<i>Brooms Mfg.—</i>						
Boys.....	M	w 8.00			10	60
Broom makers.....	M	w 17.00	w 14.00	w 8.00	10	60
Foreman.....	M	w 18.00			10	60
Salesman.....	M	m 50.00			10	60
Stenographer.....	F	w 8.00			10	60
Teamster.....	M	w 10.00			12	75
<i>Confectionery Mfg.—</i>						
Bookkeeper.....	M	m 50.00			10	60
Candy maker.....	M	w 20.00	w 16.00		10	60
Chocolate dippers.....	F	w 6.00	w 5.00	w 4.00	10	60
Engineer.....	M	m 60.00			12	75
Helpers.....	M	w 10.00	w 9.00		10	60
Packers.....	M	m 45.00			10	60
Pan man.....	M	w 15.00			10	60
Salesmen (traveling).....	M	y 1,000.00			10	60
Shipping clerk.....	M	m 50.00			10	60
Stock man.....	M	w 18.00			10	60
Teamster.....	M	m 80.00			12	75
<i>Carriages and Buggies Mfg.—</i>						
Blacksmith.....	M	d 3.00			10	60
Blacksmith helpers.....	M	d 1.75			10	60
Bookkeeper.....	M	y 1,050.00	y 900.00		10	60
Draughtsman.....	M	y 1,050.00			10	60
Foreman.....	M	y 1,050.00	y 900.00	y 800.00	10	60
Painters.....	M	d 3.00	d 2.00	d 1.75	10	60
Salesmen (traveling).....	M	y 1,000.00			10	60
Superintendent.....	M	y 900.00			10	60
Trimmers.....	M	d 8.00	d 2.00		10	60
Woodworkers.....	M	d 3.00	d 2.00		10	60

GRADED WAGES—CONTINUED.

DUBUQUE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Cigars Mfg. —</i>						
Bookkeeper.....	F	m \$ 50.00			10	60
Bunch breakers.....	F	w 10.00		w \$ 4.00	10	60
Bunch inspector.....	F	w 10.00		w 6.00	10	60
Clerk.....	F	w 7.00				
Roller.....	F	w 10.00		w 4.00	10	60
Salesmen (traveling).....	M	m 100.00			10	60
Superintendent.....	M	m 100.00			10	60
<i>Cigars Mfg. —</i>						
Bookkeeper.....	M	y 1,200 00			9	54
Caser.....	M	w 8.00			9	54
Cigar makers.....	F	w 10.00	w \$ 8.00	w 5.00	9	54
Clerk.....	M	m 50.00			9	54
Strippers.....	F	w 5.00	w 8.00	w 2.00	9	54
Superintendent.....	M	y 2,600.00			9	54
Tobacco man.....	M	w 10.00			9	54
<i>Cigars Mfg. —</i>						
*Apprentices.....	M	d 1.00			8	48
*Cigar makers.....	M	d 3.00			8	48
*Strippers.....	M	w 3.75		w 2.00	8	48
<i>Engines and Boilers Mfg. —</i>						
Blacksmiths.....	M	d 2.75	d 2.50		10	60
Blacksmith helpers.....	M	d 1.75	d 1.60		10	60
Boiler makers.....	M	d 2.75	d 2.50		10	60
Boiler maker helpers.....	M	d 1.60			10	60
Bookkeeper.....	M	m 85.00			10	60
Carpenters.....	M	d 3.00			10	60
Draughtsman.....	M	d 3.00	d 2.75		10	60
Engineers.....	M	m 45.00			12	75
Foremen.....	M	d 3.50			10	60
Machinists.....	M	d 3.00	d 2.75	d 2.50	10	60
Machinist helpers.....	M	d 1.75	d 1.60		10	60
Painters.....	M	d 2.75			10	60
Pattern makers.....	M	d 3.00	d 2.75		10	60
Stenographers.....	F	w 10.00	w 8.00		10	60
Superintendents.....	M	m 150.00	m 100.00		10	60
Teamsters.....	M	m 45.00			12	75
<i>Pearl Buttons Mfg. —</i>						
Bookkeeper.....	F	w 15.00	w 9.00		10	60
Cutters.....	M	w 19.00	w 15.00	w 10.00	10	60
Engineers.....	M	w 12.00			12	75
Firemen.....	M	w 9.50			12	75
Foremen.....	M	w 15.00	w 12.00		12	60
Manager.....	M	w 20.00			10	60
Shell sorters.....	M	d 1.50			10	60

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

DUBUQUE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Pumps and Plumbing Supplies</i>						
<i>Mfg.—</i>						
Bookkeeper.....	M	y \$ 800.00			10	60
Clerks.....	M & F	w 18.00	w \$ 12.00	w \$ 6.00	10	60
Core makers.....	M	w 6.00	w 5.00	w 3.00	10	60
Engineers.....	M	w 18.00			12	75
Foremen.....	M	w 21.00			10	60
Furnace helpers.....	M	w 11.00	w 10.00		10	60
Laborers.....	M	d 1.50			10	60
Machinists.....	M	w 18.00	w 16.00		10	60
Machinist helpers.....	M	w 12.00	w 10.00	w 8.00	10	60
Molders.....	M	w 20.00	w 18.00	w 11.00	10	60
Molder helpers.....	M	w 10.00	w 8.00		10	60
Nightwatch.....	M	w 10.00			12	84
Polishers.....	M	w 18.00	w 12.00	w 6.00	10	60
Salesman (traveling).....	M	y 1,800.00	y 1,200.00	y 750.00	10	60
Superintendent.....	M	y 1,300.00			10	60
Teamsters.....	M	d 1.50			12	75
Timekeepers.....	M	y 600.00			10	60
<i>Overalls, Jackets, etc., Mfg's—</i>						
Bookkeepers.....	M	y 2,000.00	y 1,340.00	y 520.00	10	60
Clerks.....	M	y 1,000.00	y 780.00	y 520.00	10	60
Cutters.....	M	w 14.00	w 12.00	w 10.00	10	60
Firemen.....	M	y 520.00			10	60
Machinists.....	M	w 12.00			10	60
Machine operators.....	F	w 12.00	w 10.00	w 6.00	10	60
Messenger boy.....	M	y 208.00			10	60
Presser.....	F	w 12.00	w 10.00		10	60
Salesmen.....	M	y 3,000.00	y 1,600.00	y 600.00	10	60
Scamstresses.....	F	w 10.00			10	60
Stenographer.....	F	y 624.00			10	60
Superintendent.....	M	y 2,160.00			10	60
Trimmers.....	F	w 8.50	w 2.50		10	60
<i>Overalls, Jackets, etc., Mfg.—</i>						
*Cutters.....	M	w 16.00	w 14.00	w 12.00	9	54
*Forelady.....	F	w 12.00			9	54
*Machinist.....	M	w 15.00			9	54
*Machine operators.....	F	w 14.00	w 10.00	w 8.00	9	54
*Pressers.....	F	w 12.00			9	54
*Salesmen.....	M	y 2,500.00	y 2,000.00	y 1,500.00	9	54
*Stockmen.....	M	w 15.00	w 12.00	w 10.00	9	54
*Trimmers.....	F	w 4.00	w 3.00		9	54
<i>Overalls, Jackets, etc., Mfg.—</i>						
Bookkeepers.....	M	d 5.00	d 2.50	d 1.50	9½	57
Clerks.....	M	w 12.00			9½	57
Cutters.....	M	w 15.00		w 9.00	9½	57
Engineers.....	M	d 2.50			11½	66
Forewoman.....	F	d 2.50			9½	57
General hands.....	M	w 9.00			9½	57
Machine operators.....	F	w 15.00	w 12.00	w 8.00	9½	57
Markers.....	M	d 8.00			9½	57
Pressers.....	F	w 9.00			9½	57
Salesmen.....	M	y 3,500.00	y 2,000.00	y 1,100.00	9½	57
Superintendent.....	M	d 8.00			9½	57

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

DUBUQUE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Overalls, Jackets, etc., Mfg.—</i>						
Bookkeeper.....	M	w \$ 5.00			10	60
Cutter.....	M	w 9.50	w \$ 9.00	w \$ 6.00	10	60
Foreman.....	M	w 10.00			10	60
Instructor.....	F	w 7.50			10	60
Machine operators.....	F	w 9.50		w 4.00	10	60
Pressers.....	M	w 12.00			10	60
Salesmen.....	M	m 100.00			10	60
Superintendent.....	M	d 2.00			10	60
Timekeeper.....	F	w 6.00			10	60
<i>Overalls, Jackets, etc., Mfg.—</i>						
Bill clerk.....	M	w 10.00			10	60
Bookkeeper.....	M	w 15.00			10	60
Clerk.....	M	w 9.00			10	60
Cutters.....	M	w 11.50		w 7.00	10	60
Finishers.....	F	w 8.00		w 2.50	10	60
Fireman.....	M	w 9.00			10	60
Forelady.....	F	w 9.50			10	60
Foremen.....	M	w 20.00	w 12.00		10	60
Machine operators.....	F	w 12.00	w 6.00		10	60
Pressers.....	M	w 10.00			10	60
Salesmen.....	M	y 1,500.00	y 900.00		10	60
Stenographer.....	F	w 7.00			10	60
Stock man.....	M	w 15.00		w 7.00	10	60
Superintendent.....	M	y 1,800.00			10	60
Trimmers.....	F	w 8.00	w 2.50		10	60
<i>Shoes Mfg.—</i>						
Cutters.....	M&F	w 12.00	w 6.00	w 3.00	10	60
Finishers.....	M	w 15.00			10	60
Lasters.....	M	w 12.00	w 6.00		10	60
Machine girls.....	F	w 6.00	w 4.00	w 3.00	10	60
Machine men.....	M	w 13.00			10	60
<i>Shoes Mfg.--</i>						
Bookkeeper.....	M	w 15.00			10	60
*Cutters.....	M	w 15.00	w 13.00		10	60
Engineers.....	M	w 9.00			12	75
*Factory salesman.....	M	w 16.00			10	60
*Fitters.....	M&F	w 12.00	w 8.00	w 7.00	10	60
*Helpers.....	M	w 9.00			10	60
*Lasters.....	M	w 19.00			10	60
*Machine men.....	M	w 17.00	w 15.00	w 12.00	10	60
Salesmen (traveling).....	M	y 900.00	y 600.00		10	60
Stenographer.....	F	w 5.00			10	60
Superintendent.....	M	y 1,200.00			10	60
<i>Wagons and Buggies Mfg.—</i>						
Blacksmiths.....	M	d 3.00	d 2.75	d 2.50	10	60
Bookkeepers.....	M	m 100.00			10	60
Carriage painters.....	M	d 3.50	d 3.00	d 2.50	10	60
Carriage trimmers.....	M	d 3.50	d 3.00	d 2.50	10	60
Clerks.....	M	d 1.00			10	60
Engineer.....	M	m 50.00			12	75
Foremen.....	M	d 3.50	d 2.25		10	60
Laborers.....	M	d 1.80	d 1.35		10	60
Machine men.....	M	d 2.50	d 2.00		10	60
Salesmen.....	M	m 100.00			10	60
Sawyers.....	M	d 3.00	d 2.75	d 1.75	10	60
Stenographer.....	F	m 40.00			10	60
Superintendent.....	M	y 1,500.00			10	60
Teamsters.....	M	m 50.00	m 45.00		12	75
Timekeeper.....	M	m 65.00			10	60

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

DUBUQUE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Railway Machine and Repair Shops—</i>						
*Babbitt men.....	M	d \$ 2.00			10	60
*Blacksmith helpers.....	M	d 2.00	d \$ 1.90	d \$ 1.50	10	60
*Boiler maker helpers (general)	M	d 1.85	d 1.80	d 1.60	10	60
*Boiler maker helpers (flange fire)	M	d 2.00	d 1.85	d 1.80	10	60
*Bolt Cutters.....	M	d 1.75	d 1.70	d 1.25	10	60
*Drill press men.....	M	d 2.00	d 1.90	d 1.80	10	60
*Engine truck helpers.....	M	d 1.90			10	60
*Front end and tank men.....	M	d 2.00			10	60
*General helpers.....	M	d 2.00	d 1.80	d 1.60	10	60
*Nut tappers.....	M	d 1.60			10	60
*Pilot men.....	M	d 1.90			10	60
*Punch and shears men.....	M	d 1.65			10	60
*Steam and air pipe fitters.....	M	d 2.00		d 1.80	10	60
*Steam and air pipe helpers.....	M	d 1.80		d 1.60	10	60
*Tinner.....	M	d 1.70		d 1.60	10	60
*Tire setters.....	M	d 2.00			10	60
*Tire setters' helpers.....	M	d 1.65			10	60
*Wheel boring men (truck).....	M	d 2.00		d 1.85	10	60
*Wheel press men (truck).....	M	d 2.00	d 1.90	d 1.80	10	60

FAYETTE COUNTY.

<i>Railway Machine and Repair Shops—</i>						
*Air brake helpers.....	M	d 2.25			10	60
*Babbitt men.....	M	d 2.25			10	60
*Blacksmith helpers.....	M	d 2.20		d 2.05	10	60
*Boiler washers.....	M	d 2.15			10	60
*Bolt cutters.....	M	d 2.25			10	60
*Box packers.....	M	d 2.25			10	60
*Drill press men.....	M	d 2.25			10	60
*Dry pipe men.....	M	d 2.25			10	60
*Machinists' helpers.....	M	d 1.80			10	60
*Pipe men.....	M	d 2.25			10	60
*Rod man's helper.....	M	d 2.25			10	60
*Special helpers.....	M	d 2.40		d 2.25	10	60
*Tank men.....	M	d 2.55			10	60
*Wedge setters.....	M	d 2.25			10	60

KOSSUTH COUNTY.

<i>Butter Tubs and Tanks Mfg.—</i>						
Bookkeeper.....	F	w 10.00			10	60
Clerk.....	F	w 10.00			10	60
Engineer.....	M	w 9.00			10	60
Fireman.....	M	w 9.00			10	60
Foreman.....	M	w 12.00			10	60
Machine operator.....	M	d 1.50			10	60
Stenographer.....	F	w 300.00			10	60
Superintendent.....	M	w 12.00			10	60
Teamster.....	M	d 1.50			12	75
Timekeeper.....	M	w 10.00			10	60

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

KOSSUTH COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Cigars Mfg.—</i>						
*Apprentices.....	M	w \$ 6.00			8	48
*Cigar makers.....	M	w 14.00	w \$ 12.00		8	48
*Foreman.....	M	w 18.00			8	48
Salesman.....	M	w 20.00			8	48
*Strippers (boys).....	M	w 8.00			8	48
<i>Foundry and Machine Supplies Mfg.—</i>						
Machinists.....	M	d 2.50	d 2.00		10	60
Machinists' helpers.....	M	d 1.00			10	60
Molders.....	M	d 2.00			10	60
<i>Soda Water Mfg.—</i>						
Bottlers.....	M	w 12.00			10	60
Bottle washers.....	M	w 7.50			10	60
Label boys.....	M	d .75	d .50		10	60
Teamsters.....	M	w 9.00			12	75

LINN COUNTY.

<i>Confectionery Mfg.—</i>						
Bookkeeper.....	M	w 20.00			10	60
Candy maker.....	M	w 15.00	w 9.00		10	60
Chocolate dipper.....	F	w 6.00	w 3.00		10	60
Engineer.....	M	w 8.00			12	75
Foreman.....	M	w 25.00	w 22.00		10	60
Forewoman.....	F	w 9.00	w 8.00		10	60
Shipping clerk.....	M	w 10.00			10	60
Stenographer.....	F	w 10.00			10	60
Superintendent.....	M	w 25.00			10	60
Watchman.....	M	w 10.00			12	84
<i>Cigars Mfg.—</i>						
*Cigar makers.....	M	w 16.00			8	48
Shippers.....	M & F	w 5.00			9	54
<i>Crackers and Cakes Mfg.—</i>						
Bakers.....	M	w 15.00	w 12.00	w 10.00	10	60
Bookkeeper.....	M	m 100.00			10	60
Clerks.....	M	w 9.00			10	60
Engineer.....	M	w 20.00			12	75
Foreman.....	M	w 40.00			10	60
Manager.....	M	w 38.00			10	60
Nailers up.....	M	w 11.00	w 10.00		10	60
Shipping clerk.....	M	w 17.00		w 9.00	10	60
Stenographer.....	F	w 12.00			10	60
Superintendent.....	M	w 48.00			10	60
Timekeeper.....	M	w 15.00			10	60
Watchman.....	M	w 10.50			12	84

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

LINN COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Cutlery Mfg.—</i>						
Apprentices	M	w \$ 8.00			10	60
Bow men	M	d 2.00			10	60
Buffers	M	d 1.50			10	60
Droppers	M	d 2.75			10	60
Enviueer	M	w 12.00			12	75
Finishers	M	d 3.00			10	60
Foremen	M	w 20.00			10	60
Grinders	M	d 2.00			10	60
Handy men	M	d 2.00			10	60
Platers	M	d 2.25			10	60
Pollahers	M	d 2.00			10	60
Steel cutters	M	d 2.25			10	60
Superintendent	M	m 100.00			10	60
<i>Laundry Mfg.—</i>						
Bookkeeper	F	w 6.00			10	60
Collar ironers	F	d 1.00			10	60
Drivers	M	w 10.00			10	60
Engineers	M	w 12.00			12	75
Finishers	F	d 1.00			10	60
Fireman	M	w 10.00			10	60
Foreman	M	w 12.00			10	60
Mangle girls	F	d 1.00			10	60
Shirt ironers	F	d 1.00			10	60
Starchers	F	d 1.00			10	60
Washwomen	F	d 1.00			10	60
<i>Laundry Mfg.—</i>						
Apprentice girls	F	w 4.00			10	60
Bookkeeper	F	w 6.00			10	60
Collar ironer	F	d 1.25			10	60
Drivers	M	w 13.00			10	60
Engineer	M	w 12.00			12	75
Finishers	F	d 1.00			10	60
Foreman	M	w 13.00			10	60
Hand ironers	F	d 1.00			10	60
Markers	F	d 1.25			10	60
Sorters	M	w 10.00			10	60
Starchers	F	d 1.25			10	60
Washman	M	w 14.00			10	60
Washman's apprentice	M	w 6.00			10	60
<i>Machinery and Boilers Mfg.—</i>						
Blacksmith	M	d 2.75			10	60
Blacksmith helpers	M	d 1.75			10	60
Boiler makers	M	d 2.75			10	60
Boiler maker helpers	M	d 1.75			10	60
Bookkeeper	M	d 2.50			10	60
Engineer (boy)	M	d .75			12	75
Foremen	M	d 3.00	d \$ 2.75		10	60
Machinists	M	d 2.75	d 2.50	d \$ 2.25	10	60
Machinist helper	M	d 1.65			10	60
Molder	M	d 2.75			10	60
Molder's helper	M	d 1.50			10	60
Pattern maker	M	d 2.50	d 2.00		10	60
Teamster	M	m 40.00			12	75
Timekeeper	M	d 1.50			10	60
<i>Machinery Mfg.—</i>						
Foreman	M	m 100.00			10	60
Machinists	M	d 2.50			10	60
Machinists' helper	M	d 1.50			10	60
Pattern maker	M	d 3.00			10	60

GRADED WAGES—CONTINUED.

LINN COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Malt Liquors Mfg.—</i>						
Bookkeeper.....	M	m \$100.00	m \$ 85.00	m \$ 80.00	10	80
Bottlers.....	M	w 12 00	w 10 50		10	80
Carpenters.....	M	w 14 00			10	80
Cellar men.....	M	w 15 00	w 14 00		10	80
Engineers.....	M	w 14 00			12	75
Firemen.....	M	w 12 00			10	80
Foremen.....	M	w 16 00			10	80
Laborers.....	M	w 12 00			10	80
Salesmen (traveling).....	M	m 100 00			10	80
Superintendent.....	M	m 125 00			10	80
Teamster.....	M	m 75 00	m 65 00	m 60 00	12	75
Washers.....	M	w 9 00			10	80

LEE COUNTY.

<i>Boots and Shoes Mfg.—</i>						
Bookkeeper.....	M	w 15.00			10	80
Boys (under 16 years).....	M	w 4.00	w 3.00	w 2.00	10	80
*Bottomers.....	M	w 21.00	w 18.00	w 15.00	10	80
Clerk.....	M	w 12.00			10	80
*Cutters.....	M	w 18.00	w 18.50	w 12.00	10	80
Engineer.....	M	w 15.00			12	75
*Finishers.....	M	w 10.00	w 9.00	w 7.50	10	80
Firemen.....	M	w 8.00			12	75
*Fitters.....	F	w 9.00	w 7.50	w 5.00	10	80
Foremen.....	F	w 30.00		w 18.00	10	80
Girls (under 16 years).....	F	w 4.00	w 3.00	w 2.00	10	80
Heel builders (boys).....	M	w 7.50	w 5.00	w 3.00	10	80
*Lasters.....	M	w 15.00	w 12.00	w 10.00	10	80
*Lining cutters.....	M & F	w 10.00	w 9.00	w 7.50	10	80
*Packers.....	F	w 6.00	w 5.00	w 3.50	10	80
*Sole fitters.....	M	w 10.00	w 9.00	w 7.50	10	80
Superintendent.....	M	w 84.00			10	80
Timekeeper.....	M	w 15.00			10	80
<i>Building Material Mfg.—</i>						
Bench carpenters.....	M	d 2.25			10	80
Bookkeeper.....	M	m 80.00			10	80
Engineers.....	M	w 9.00			12	75
Finishers.....	M	d 2.00			10	80
Foremen.....	M	d 8.00			10	80
Glaziers.....	M	d 1.75			10	80
Machine men.....	M	d 2.25			10	80
Superintendent.....	M	w 25.00			10	80
Teamsters.....	M	w 9.00			12	75
Timekeeper.....	M	m 50.00			10	80
Yard men.....	M	d 1.50			10	80
<i>Butter Renovators—</i>						
Bookkeeper.....	M	m 80.00			10	80
Butter maker.....	M	w 10.00			10	80
Churn man.....	M	w 10.00			10	80
Engineer.....	M	m 80.00			12	75
Fireman.....	M	m 50.00			12	75
Foreman.....	M	y 1,000.00			10	80
Helpers.....	M	w 9.00			10	80
Manager.....	M	y 1,200.00			10	80

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

LEE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Canned Goods and Pickles—</i>						
Bookkeeper.....	M	m \$ 55.00			10	60
Bottlers.....	F	d 1.00			10	60
Boys.....	M	d .75			10	60
Engineer.....	M	d 1.50			12	75
Foreman.....	M	w 11.00			10	60
Labelers.....	F	d 1.25			10	60
Laborers.....	M	d 1.50			10	60
Peelers.....	F	d 1.00			10	60
Sorters.....	F	d 1.25			10	60
Superintendent.....	M	m 125.00			10	60
Timekeeper.....	F	m 30.00			10	60
<i>Cigars Mfg.—</i>						
*Cigar makers.....	M	w 18.00	w \$ 15.00	w \$ 12.00	8	48
*Strippers.....	M & F	w 3.00			8	48
<i>Dressed Poultry and Feathers—</i>						
Bookkeeper.....	M	y 900.00			10	60
Clerk.....	M	y 480.00			10	60
Engineer.....	M	w 14.00			12	75
Fireman.....	M	w 10.00			12	75
Foreman.....	M	y 1,500.00			10	60
Poultry dressers.....	M	d 2.25	d 2.00	d 1.50	10	60
Receiving clerk.....	M	y 900.00			10	60
Shipping clerk.....	M	y 600.00			10	60
Superintendent.....	M	y 2,000.00			10	60
Truckers.....	M	w 12.00			10	60
<i>Overalls, Jackets and Shirts Mfgs.</i>						
Cutters.....	M	w 15.00			10	60
Engineer.....	M	w 9.00			12	75
Laundry girls.....	F	w 9.00			10	60
Machinists.....	M	w 15.00			10	60
Manager.....	M	y 1,860.00			10	60
Seamstresses.....	F	w 8.00			10	60
Starcher.....	F	w 11.00			10	60
<i>Plows, Harrows and Planters Mfgs.—</i>						
Blacksmiths.....	M	d 2.70	d 2.40		10	60
Blacksmiths' helpers.....	M	d 1.70			10	60
Bookkeeper.....	M	m 85.00			10	60
Clerk.....	M	m 75.00			10	60
Engineer.....	M	d 2.55			12	75
Foreman.....	M	m 180.00	m 100.00	m 75.00	10	60
Laborers.....	M	d 1.50	d 1.25		10	60
Painters.....	M	d 2.20			10	60
Plow fitters.....	M	d 2.20			10	60
<i>Plows, Harrows and Planters Mfg.—Continued</i>						
Setters up.....	M	d \$ 1.50			10	60
Superintendent.....	M	y 2,400.00			10	60
Teamsters.....	M	m 40.00			12	75
Timekeepers.....	M	d 1.75			10	60
<i>Starch Mfg.—</i>						
Bookkeeper.....	M	y 720.00			9 1/2	57
Boys.....	M	d 1.33	d \$.83		9 1/2	57
Foremen.....	M	y 900.00			9 1/2	57
Manager.....	M	y 1,200.00			9 1/2	57
Starch men.....	M	d 1.75	d 1.50		9 1/2	57
Stenographer.....	F	y 540.00			9 1/2	57
Women.....	F	d 1.00	d .83		9 1/2	57

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

MAHASKA COUNTY.

Kind of Business and Division of Occupation.	Sex	By Year, Y; Month, M Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day	Week.
<i>Overalls and Jackets Mfg.—</i>						
Bookkeeper.....	M	w \$ 10.00			9	54
*Cutters.....	M	m 100.00	m \$ 60.00		9	54
*Cutters' apprentice.....	M	m 36.00			9	54
*Foremen.....	M	w 15.00			9	54
*Seamstresses.....	F	w 10.00	w 9.00	w \$ 4.50	9	54
*Shipping clerk.....	M	w 12.00			9	54
Superintendent.....	M	y 1,200.00			9	54
<i>Book binding—</i>						
Book binders.....	M	w 18.00	w 12.00		9	54
Book binders.....	F	w 4.50	w 4.00	w 8.50	9	54
Foreman.....	M	w 18.00			9	54

MARSHALL COUNTY.

<i>Axel Grease and Oils—</i>						
Bookkeeper.....	M	m 90.00	m 75.00		10	60
Coopers.....	M	d 2.00			10	60
Engineer.....	M	d 2.00			12	75
Foremen.....	M	d 2.50			10	60
Grease makers.....	M	d 2.50			10	60
Laborers.....	M	d 1.60	d 1.25		10	60
Salesmen.....	M	m 100.00	m 80.00		10	60
Stenographers.....	F	w 9.50	w 8.00		9	54
Superintendent.....	M	m 150.00			10	60
Teamsters.....	M	d 2.00			12	75
<i>Cigars Mfg —</i>						
*Cigar makers.....	M	w 12.00	w 9.00		8	48
Foreman.....	M	w 12.00			8	48
Manager.....	M	w 12.00			8	48
*Strippers.....	M	w 3.50	w 3.00		8	48
<i>Gas Engines and Furnaces Mfg.—</i>						
Blacksmiths.....	M	d 2.75			10	60
Bookkeepers.....	M	m 100.00			10	60
Carpenters.....	M	d 2.00			10	60
Clerk.....	M	m 40.00			10	60
Engineers.....	M	m 45.00			12	75
Foremen.....	M	m 100.00	m 80.00	m 75.00	10	60
Laborers.....	M	d 1.75	d 1.25		10	60
Machinists.....	M	d 2.75		d 2.00	10	60
Molders.....	M	d 2.50			10	60
Painters.....	M	d 2.50			10	60
Pattern makers.....	M	d 3.00			10	60
Salesmen.....	M	m 125.00	w 75.00		10	60
Stenographer.....	F	m 40.00			10	60
Superintendent.....	M	m 100.00			10	60
Teamsters.....	M	m 45.00			12	75
Tinners.....	M	d 2.50			10	60

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

MARSHALL COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
Laundry—						
Bookkeeper.....	M	w \$ 7.50	w \$ 5.00		10	60
Drivers.....	M	w 12 00	w 10.00		10	60
Engineers.....	M	w 10.00			12	75
Ironers.....	F	d 1.00			10	60
Markers.....	F	w 7.50	w 6.00		10	60
Machine operators.....	F	w 7.50	w 6.00	w \$ 4.50	10	60
Mangle girls.....	F	d 75			10	60
Sorters.....	F	d 1.00			10	60
Washerwoman.....	M	w 12 00			10	60
Washerwoman.....	F	w 6.00			10	60
Machinery Supplies Mfg -						
Machinists.....	M	d 2.50			10	60
Machinists' helpers.....	M	d 1.25			10	60
Machinists' apprentices.....	M	d .50			10	60
Stenographer.....	F	m 45 00			10	60
Superintendent.....	M	w 20.00			10	60
Maple Syrup Sugar Mfg. —						
Bookkeeper.....	M	w 25.00			10	60
Engineers.....	M	w 12.50			10	60
Laborers.....	M	d 1.75	d 1.25		10	60
Salesmen.....	M	m 75.00			10	60
Superintendent.....	M	w 15.00			10	60
Women.....	F	d .50			10	60
Newspaper—						
Ad. men.....	M	w 17.00			9 ¹ / ₄	55 ¹ / ₂
Bookkeeper.....	M	m 60.00			9 ¹ / ₄	55 ¹ / ₂
Business manager.....	M	m 100.00			9 ¹ / ₄	55 ¹ / ₂
Compositors.....	M	w 16.00			9 ¹ / ₄	55 ¹ / ₂
Editorial staff.....	M	m 100.00	m 75 00		9 ¹ / ₄	55 ¹ / ₂
Engineer.....	M	m 52.00			12 ¹ / ₄	72
Foreman.....	M	w 18.00			9 ¹ / ₄	55 ¹ / ₂
Linotype operator.....	M	w 21.00			9 ¹ / ₄	55 ¹ / ₂
Mailing clerk.....	M	m 65.00			9 ¹ / ₄	55 ¹ / ₂
Makeup.....	M	w 18 00	w 16.00		9 ¹ / ₄	55 ¹ / ₂
Pressmen.....	M	m 65.00			9 ¹ / ₄	55 ¹ / ₂
Stenographer.....	F	m 40.00			9	54
Packing House —						
Bookkeeper.....	M	m 70 00				
Boys.....	M	d 1.00		d .50	10	60
Butchers.....	M	d 2.25			10	60
Cellar men.....	M	d 1.75			10	60
Cutters.....	M	d 2.25			10	60
Engineer.....	M	w 20.00			12	75
Firemen.....	M	d 2.00			12	75
Foremen.....	M	d 8.00			10	60
Girls.....	F	w 8 00	w 6 00	w 4.00	10	60
Laborers.....	M	d 1.75	d 1.50		10	60
Teamsters.....	M	m 40.00			12	75
Plastering Trowels Mfg. —						
Blacksmiths.....	M	d 2.00			9	54
Bookkeeper.....	F	w 6.00			9	54
Foremen.....	M	d 2.00			9	54
Machinists.....	M	d 2.00			9	54
Machinists' apprentices.....	M	d .50			9	54

GRADED WAGES—CONTINUED.

MARSHALL COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Sash and Doors Mfg. —</i>						
Bench men	M	d \$ 2.50	d \$ 2.00		10	60
Bookkeeper	F	y 900.00			10	60
Engineer	M	w 10.00			12	75
Foremen	M	d 2.50			10	60
Machine men	M	d 2.50	d 1.75		10	60
Teamster	M	d 1.50			12	75
<i>Steel Mats Mfg. —</i>						
Bookkeeper	M	m 54.00			10	60
Foremen	M	m 75.00		m \$ 40.00	10	60
General manager	M	m 100.00			10	60
Girls	F	w 5.50			9	54
Machinists	M	m 75.00			10	60
Salesman	M	m 75.00			10	60
<i>Structural Iron and Machinery Supplies Mfg. —</i>						
Boiler makers	M	d 2.50			10	60
Bookkeepers	M	m 75.00		m 30.00	10	60
Core maker	M	d 2.00			10	60
Engineer	M	w 9.00			12	75
Foremen	M	d 3.35	d 3.00		10	60
Laborers	M	d 1.25			10	60
Machinists	M	d 2.50			10	60
Machinists' apprentices	M	d .75			10	60
Manager	M	m 150.00			10	60
Molders	M	d 2.50			10	60
Pattern makers	M	d 3.00			10	60
Stenographers	F	m 20.00			10	60
Teamster	M	m 40.00			12	75
<i>Vinegar and Pickles—</i>						
Bookkeeper	M	m 40.00				
Cooper	M	y 480.00			10	60
Distiller	M	y 600.00			10	60
Engineer	M	y 600.00			12	75
Foreman	M	y 720.00			10	60
Laborers	M	y 450.00			10	60
Packers	M	y 480.00			10	60
Salesman	M	y 900.00			10	60
Stenographer	F	y 880.00			10	60
Superintendent	M	y 1,200.00			10	60
Teamsters	M	y 480.00			12	75
Vinegar maker	M	y 600.00			10	60

MONROE COUNTY.

<i>Building Contractors—</i>						
Carpenters	M	d 2.50	d 2.00	d 1.75	10	60
Laborers	M	d 1.50			8	48
Teamsters	M	d 2.50			8	48

GRADED WAGES—CONTINUED.

MUSCATINE COUNTY.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Cigars Mfg.—</i>						
*Cigar makers.....	M & F	w \$ 12.00	w \$ 9.00	.....	8	48
*Strippers.....	M	w 5.00	w 3.00	.....	8	48
<i>Cigars Mfg.—</i>						
Cigar makers.....	M & F	w 12.00	w 9.00	.....	10	60
Strippers.....	F	w 5.00	.....	.....	10	60
Salesmen.....	M	w 10.00	.....	.....	10	60
<i>Gas Engines and Machinery—</i>						
Machinists.....	M	d 2.75	.....	.....	10	60
Machinists' apprentice.....	M	w 4.50	.....	.....	10	60
Pattern makers.....	M	d 3.00	.....	.....	10	60
<i>Iron and Supplies—</i>						
Bookkeeper.....	M	y 350.00	.....	.....	10	60
Engineer.....	M	d 2.00	.....	.....	12	75
Laborers.....	M	d 1.50	.....	.....	10	60
Manager.....	M	y 900.00	.....	.....	10	60
Molders.....	M	d 2.75	d 2.25	.....	10	60
Molders' apprentice.....	M	d 1.50	d 1.00	.....	10	60
Superintendent.....	M	y 900.00	.....	.....	10	60
<i>Laundry—</i>						
Boy.....	M	w 4.50	.....	.....	10	60
Drivers.....	M	w 9.00	.....	.....	10	60
Engineer.....	M	w 12.00	.....	.....	12	75
Hand Ironers.....	F	w 6.00	.....	.....	10	60
Manager.....	M	w 12.00	.....	.....	10	60
Polisher.....	F	w 7.00	.....	.....	10	60
Washerman.....	M	w 12.00	.....	.....	10	60
<i>Machinery Supplies Mfg.—</i>						
Blacksmiths.....	M	d 2.50	.....	.....	10	60
Bookkeeper.....	M	w 21.00	.....	.....	10	60
Clerks.....	M	w 10.50	.....	.....	10	60
Engineer.....	M	d 2.00	.....	.....	12	75
Foreman.....	M	y 1,500.00	.....	.....	10	60
Laborers.....	M	d 1.75	.....	.....	10	60
Machinists.....	M	d 3.25	d 3.00	d 2.50	10	60
Machinists' helpers.....	M	d 1.25	.....	.....	10	60
Machinists' apprentices.....	M	d 1.00	d .75	.....	10	60
Manager.....	M	y 2,000.00	.....	.....	10	60
Pattern maker.....	M	d 2.50	.....	.....	10	60
Stenographer.....	M	m 23.00	.....	.....	10	60
Tinners.....	M	d 2.50	.....	.....	10	60
<i>Machinery Supplies Mfg.—</i>						
Foreman.....	M	d 8.00	.....	.....	10	60
Machinist.....	M	d 2.75	.....	.....	10	60
Machinists' helpers.....	M	d 1.25	.....	.....	10	60
Machinists' apprentices.....	M	w 8.00	.....	.....	10	60
Pattern makers.....	M	d 2.25	.....	.....	10	60

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

MUSCATINE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Oat Meal Mfg.—</i>						
Bookkeeper.....	F	w \$ 5.00			10	60
Clerks.....	F	w 4.50	w \$ 4.00		10	60
Engineer.....	M	w 16.00			12	75
Fireman.....	M	w 12.00			12	75
Girls.....	F	w 4.50	w 3.00	w \$ 2.50	10	60
Laborers.....	M	d 1.50			10	60
Manager.....	M	y 2,500.00			10	60
Millers.....	M	w 16.00			10	60
Stenographer.....	F	w 10.00			10	60
Superintendent.....	M	w 23.00			10	60
Timekeepers.....	F	w 7.00			10	60
<i>Pearl Buttons Mfg.—</i>						
Cutters.....	M	w 14.00	w 9.00		10	60
Shell sorters.....	M	w 9.00			10	60
Superintendent.....	M	w 15.00			10	60
<i>Pearl Buttons Mfg.—</i>						
Bookkeeper.....	M	w 15.00			10	60
Button sorters.....	F	w 6.00		w 1.25	10	60
Corders.....	F	w 6.00	w 4.50		10	60
Clerks.....	F	w 12.00			10	60
Cutters.....	M	w 17.00	w 14.00	w 10.00	10	60
Electrician.....	M	w 14.00			10	60
Foremen.....	M	w 19.00	w 12.00		10	60
Forelady.....	F	w 8.00			10	60
Machine girls.....	F	w 8.00		w 3.00	10	60
Manager.....	M	y 1,800.00			10	60
Shell sorters.....	M	w 10.00	w 8.00		10	60
Superintendent.....	M	w 15.00			10	60
<i>Pearl Buttons Mfg.—</i>						
Bookkeepers.....	M	m 25.00			10	60
Button cutters.....	M	w 20.00	w 15.00	w 10.00	10	60
Engineer.....	M	w 12.00			12	75
Foreman.....	M	w 15.00			10	60
Grinders.....	F	w 3.00			10	60
Machine girls.....	F	w 12.00	w 9.00	w 5.00	10	60
Manager.....	M	y 1,500.00			10	60
Polishers.....	M	w 12.00			10	60
Shell sorters.....	M	w 9.00			10	60
Stenographer.....	F	w 6.00			10	60
<i>Sash and Doors Mfg.—</i>						
Bench carpenters.....	M	d 2.75	d 2.00		10	60
Bookkeepers.....	M	y 1,000.00			10	60
Clerks.....	M	y 600.00			10	60
Engineer.....	M	y 900.00			12	75
Fireman.....	M	y 500.00			12	75
Foreman.....	M	y 1,000.00			10	60
Glaziers.....	M	d 2.00			10	60
Laborers.....	M	w 9.00	w 8.00		10	60
Machine men.....	M	d 2.50		d 1.50	10	60
Salesmen.....	M	y 1,500.00	y 1,200.00		10	60
Superintendent.....	M	y 2,000.00			10	60
Teamsters.....	M	w 10.00			12	75
Timekeepers.....	M	y 400.00			10	60

GRADED WAGES—CONTINUED.

MUSCATINE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Sash and Doors Mfg.—</i>						
Bookkeeper	M	y \$1,200.00	y \$1,100.00	y \$ 600.00	10	60
Carpenters	M	d 2.75	d 1.75	d 1.75	10	60
Clerks	M	y 2,200.00	y 1,800.00	y 1,000.00	10	60
Engineers	M	y 1,200.00	y 1,100.00	.....	12	75
Firemen	M	w 12 00	.....	.....	12	75
Foremen	M	y 800.00	.....	.....	10	60
Glaziers	M	d 2.25	d 1.75	d 1.75	10	60
Laborers	M	d 1.50	d 1.25	.....	10	60
Machine men	M	d 2.75	.....	d 1.50	10	60
Manager	M	y 5,000.00	.....	.....	10	60
Office boys	M	w 8.00	w 7.00	w 6.00	10	60
Stenographer	F	y 900.00	y 750.00	y 812.00	10	60
Superintendent	M	y 1,800.00	.....	.....	10	60
Time keeper	M	y 600.00	.....	.....	10	60
<i>Street Railway and Gas Plant—</i>						
Carshop men	M	m 45.00	.....	.....	10	60
Conductors	M	m 35.00	.....	.....	12	84
Engineers	M	m 65.00	m 50.00	m 45.00	8	51
Firemen	M	m 50.00	.....	.....	8	56
Foreman (gas house)	M	m 75.00	.....	.....	10	60
Foreman (car shop)	M	m 55.00	.....	.....	10	60
Helpers	M	d 1.75	d 1.50	.....	10	60
Motormen	M	m 45.00	.....	.....	12	84
Oilers	M	m 40.00	.....	.....	12	84
Road master	M	m 55.00	.....	.....	10	60
Stokers (gas house)	M	m 50.00	.....	.....	8	51
Trackmen	M	d 1.50	.....	.....	10	60

POLK COUNTY.

<i>Cigars Mfg.—</i>						
*Cigarmakers	M	w 18.00	w 15.00	w 12.00	8	48
*Foreman	M	w 20.00	.....	.....	8	48
*Strippers	M	w 7.00	w 6.00	w 5.00	8	48
Salesmen (traveling)	M	w 100.00	m 80.00	m 60.00	8	48
<i>Dies, Tools and Light Machinery Mfg.—</i>						
Assemblers	M	d 3.00	d 2.00	d 1.00	10	60
Assistant superintendent	M	w 85.00	.....	.....	10	60
Bench hands (girls)	F	w 5.00	w 4.00	w 3.50	10	60
Bookkeeper	M	m 100.00	.....	.....	10	60
Buffer	M	d 2.00	d 1.50	d 1.25	10	60
Carpenter	M	d 2.25	.....	.....	10	60
Clerk	M	m 50.00	.....	.....	10	60
Drill pressmen	M	d 2.00	d 1.50	d 1.00	10	60
Enamellers	M	d 8.00	d 1.75	d 1.75	10	60
For men	M	w 25.00	.....	.....	10	60
Janitor	M	d 1.50	.....	.....	10	60
Machinists	M	d 3.00	d 2.75	.....	10	60
Milling machine operators	M	d 2.25	d 2.00	d 1.50	10	60
Nickle platers	M	d 2.50	d 2.25	d 2.00	10	60
Punch press hands	M	d 2.25	d 1.75	d 1.00	10	60
Salesman (city)	M	m 50.00	.....	.....	10	60
Superintendent	M	w 50.00	.....	.....	10	60
Timekeeper	M	m 60.00	.....	.....	10	60
Tool makers	M	d 3.50	d 3.25	d 3.00	10	60
Turret lathe men	M	d 2.00	d 1.50	d 1.25	10	60

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

POLK COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day	Week.
<i>Foundry and Machine Shop (Contract Work)—</i>						
Blacksmiths.....	M	d \$ 2.88	d \$ 2.70	d \$ 2.50	9	54
Blacksmiths' helpers.....	M	d 1.75	d 1.65	d 1.50	9	54
Core makers.....	M	w 15.00	w 12.00	w 10.00	9	54
Foremen.....	M	w 21.00	w 20.00	w 18.00	9	54
Laborers.....	M	d 1.75	d 1.65	d 1.50	9	54
Machinists.....	M	d 8.15	d 8.00	d 2.70	9	54
Machinists' helpers.....	M	d 1.65	d 1.50		9	54
Molders.....	M	d 8.00	d 2.75	d 2.50	9	54
Pattern makers.....	M	d 3.50	d 3.25	d 3.00	9	54
<i>Gloves and Millens Mfg.—</i>						
*Assistant packers.....	F	w 7.00		w 4.00	9	54
Bookkeeper.....	M	y 600.00			10	60
Clerk.....	M	y 600.00			10	60
Engineer.....	M	y 600.00			10	60
*Glove cutters.....	M	w 18.00	w 12.00	w 9.00	10	60
*Machine operators.....	M & F	w 12.00	w 8.00	w 6.00	10	60
*Packers.....	M	w 10.00	w 8.00		10	60
Stenographer.....	F	m 50.00			9	54
Superintendent.....	M	y 1,200.00			10	60
*Wax threaders.....	M	w 25.00	w 15.00	w 12.00	10	60
<i>Laundry—</i>						
Bookkeeper.....	F	w 10.00			10	60
Drivers.....	M	d 2.00			10	60
Engineers.....	M	w 15.00			12	75
Foreman.....	M	w 18.00			10	60
Hand Ironers.....	F	w 8.00		w 6.00	10	60
Machine operators.....	M	w 18.00		w 10.00	10	60
Machine operators.....	F	w 10.00		w 6.00	10	60
Manglers.....	F	w 5.00	w 4.00	w 3.00	10	60
Markers.....	F	w 10.00		w 8.00	10	60
Shirt polishers.....	F	w 10.00		w 6.00	10	60
Sorters.....	F	w 10.00		w 8.00	10	60
Washmen.....	M	d 8.00	d 2.50	d 2.00	10	60
Washmen's helpers.....	M	d 2.00	d 1.50		10	60
<i>Printing and Binding—</i>						
*Bindery girls.....	F	w 8.00	w 7.00	w 5.00	9	54
Bookkeeper.....	M	w 18.00			9	54
*Compositors.....	M	w 18.00			9	54
*Cylinder pressmen.....	M	w 18.00			9	54
*Cylinder press feeders.....	M	w 10.00			9	54
Driver.....	M	w 7.00			9	54
*Foreman.....	M	w 25.00	w 20.00		9	54
*Forwarder.....	M	w 18.00			9	54
Janitor.....	M	w 10.00			9	54
*Makeup.....	M	w 17.00			9	54
*Platen pressman.....	M	w 13.65			9	54
*Platen press feeder.....	M	w 6.30			9	54
*Ruler.....	M	w 18.00			9	54
*Shipping clerk.....	M	w 12.50			9	54
Stenographer.....	F	w 15.00	w 10.00		9	54

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

POLK COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Street Railway—</i>						
Ash wheelers.....	M	d \$ 1.60			10	60
Blacksmiths.....	M	d 2 25			9	54
Blacksmiths' helpers.....	M	d 1.58			9	54
Boiler washers.....	M	d 1.75			9	54
Carpenters.....	M	d 2 25			9	54
Car repairers.....	M	d 2 25	d \$ 1.75	d \$ 1.50	9	54
Conductors.....	M	h .20	h .17	h .15	a	
Coal shovellers.....	M	d 1.60			10	60
Cupola tenders.....	M	d 1.60			9	54
Engineers.....	M	m 80.00	m 70.00		12	84
Firemen.....	M	m 50.00			8	66
Fireman boiler room.....	M	d 2 25			9	66
Machinists.....	M	d 2 80	d 2 25		9	54
Motormen.....	M	h .20	h .17	h .15	a	
Molders.....	M	d 2 48			9	54
Others and assistants.....	M	m 52 50			12	84
Painters.....	M	d 2 25	d 1 75	d 1 25	9	54
Superintendent of motive power and chief engineer.....	M	y 1,800.00			10	60
Teamsters.....	M	m 45.00			12	72
Track men.....	M	d 1 75			10	60
Wire men.....	M	d 8.00	d 2 75		9	54
<i>Telephone Service—</i>						
*Chief operators.....	F	h .18	h .16	h .15	9	54
*Day relief operators.....	F	h .11			9	51
*Regular relief operators.....	F	h .12½			6	86
*Substitute operators.....	F	h .10			9	54
*Switch board operators.....	F	h .13	h .12½	h .11	9	54
<i>Telephone Service—</i>						
*Chief operators.....	F	m 45.00	m 35.00		9	54
*Relief operators.....	F	m 20.00	m 18.00	bm 15.00	7	42
*Switch board operators.....	F	m 80.00	m 26.00	m 25.00	9	54
*Toll line operators.....	F	m 32.50	m 27.50	m 25.00	9	54
*Toll line relief operators.....	F	m 20.00			7	42

POTTAWATTAMIE COUNTY.

<i>Cigars Mfg. —</i>						
*Cigar makers.....	M	w 18.00	w 12.00	w 7.50	8	48
*Foreman.....	M	w 20.00			8	48
Salesman.....	M	m 100.00			10	60
*Strippers.....	M	w 6.00		w 8.00	8	48
<i>Cigars Mfg. —</i>						
Cigar makers.....	M & F	w 10.00	w 7.00	w 5.00	9	54
Foreman.....	M	y 1,000.00			9	54
Strippers.....	M & F	w 8.25		w 2.75	9	54

* Wage scale as per union agreement.

a Length of work day for motormen and conductors varies from 10¼ to 18½ hours per day for 7 days per week.

b Works only 5 hours per day.

GRADED WAGES—CONTINUED.

POTTAWATTAMIE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Confectionery Mfg.—</i>						
Bookkeeper	M	m \$100.00	m \$ 50.00	m \$ 40.00	10	60
Candy maker	M	d 8.00	d 2.50	d 2.00	10	60
Candy maker apprentice	M	d 1.50	d 1.25	d 1.00	10	60
Chocolate dippers	F	w 9.00	w 6.00	w 4.00	10	60
Clerks	M	w 12.00	w 7.50		10	60
Engineers	M	m 90.00	m 60.00		12	75
Firemen	M	d 1.75			12	75
Foremen	M	m 100.00	m 90.00	m 50.00	10	60
Packers	F	w 6.00	w 4.00		10	60
Salesmen	M	y 2,500.00	y 1,200.00		10	60
Shipping clerk	M	w 15.00			10	60
Superintendent	M	w 30.00			10	60
Timekeeper	M	w 12.00			10	60
<i>Cream Separators Mfg.—</i>						
Foreman	M	d 3.00			10	60
Machinists	M	d 3.00	d 2.50		10	60
Superintendent	M	y 1,200.00			10	60
<i>Foundry and Machine Supplies Mfg.—</i>						
Blacksmiths	M	d 2.50			10	60
Bookkeeper	M	w 10.00			10	60
Carpenter	M	d 2.50			10	60
Engineers	M	d 1.75			12	75
Foreman	M	d 3.50	d 3.00	d 2.65	10	60
General manager	M	y 1,500.00			10	60
Laborers	M	d 1.50			10	60
Machinists	M	d 2.75	d 2.65	d 2.20	10	60
Machinists' helpers	M	d 1.75	d 1.50		10	60
Manager	M	m 100.00			10	60
Molders	M	d 3.05			10	60
Molders' helpers	M	d 1.50			10	60
Pattern makers	M	d 3.00			10	60
Stenographer	F	w 7.00			10	60
Superintendent	M	w 75.00			10	60
<i>Hardware Specialties Mfg.—</i>						
Blacksmiths	M	d 2.25			10	60
Bookkeeper	M	m 30.00			10	60
Engineer	M	w 12.00			12	75
Laborers	M	d 1.75	d 1.50		10	60
Machinists	M	d 2.50			10	60
Mold rs	M	d 3.50			10	60
Superintendent	M	m 100.00			10	60
<i>Lamps and Lamp Mantels Mfg.—</i>						
Blacksmith	M	d 2.75			10	60
Girls	F	w 10.00		w 8.00	10	60
Machinists	M	d 3.00	d 2.50	d 1.75	10	60
Machinists' apprentices	M	w 3.00			10	60
Mantle makers	M	m 75.00			10	60
Molders	M	d 3.00			10	60
Stenographer	F	w 8.00			10	60
Superintendent	M	m 75.00			10	60

GRADED WAGES—CONTINUED.

POTTAWATTAMIE COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D, Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Laundry—</i>						
Bookkeeper.....	M	w \$ 8.00	w \$ 6.00	.....	10	60
Business manager.....	M	m 100.00	.....	.....	10	60
Collar and cuff polisher.....	F	w 7.00	.....	.....	10	60
Drivers.....	M	w 18.00	w 12.00	w \$ 10.00	10	60
Engineer.....	M	w 14.00	w 12.00	.....	12	75
Foreman.....	M	w 16.50	w 15.00	.....	10	60
Hand ironers.....	F	d 1.00	.....	.....	10	60
Mangle girls.....	F	w 6.00	w 5.00	w 4.00	10	60
Markers.....	F	w 15.00	.....	w 10.00	10	60
Shirt polishers.....	F	w 7.00	w 6.50	w 5.00	10	60
Starchers.....	F	w 6.00	w 5.00	w 4.00	10	60
Superintendent.....	M	w 85.00	w 25.00	w 20.00	10	60
Washman.....	M	w 12.00	w 10.00	w 9.00	10	60
Washman's helpers.....	M	w 6.00	.....	.....	10	60
<i>Printing (Job)—</i>						
Bookkeeper.....	M	w 10.00	.....	.....	9	54
Compositors.....	M	w 16.00	.....	.....	9	54
Foreman.....	M	w 20.00	.....	.....	9	54
Press feeders.....	M	w 7.50	w 6.00	.....	9	54
<i>Preserving and Maple Sugar Re- finery—</i>						
Bookkeeper.....	M	m 80.00	m 55.00	.....	10	60
Engineer.....	M	w 12.00	.....	.....	12	75
Head cook.....	M	w 15.00	.....	.....	10	60
Helpers.....	M	d 1.50	.....	.....	10	60
Manager.....	M	m 100.00	.....	.....	10	60
Preserver.....	M	w 15.00	.....	.....	10	60
Salesmen.....	M	m 150.00	m 125.00	m 75.00	10	60
Stenographer.....	F	w 12.00	.....	.....	10	60
Superintendent.....	M	m 100.00	.....	.....	10	60
Syrup cook.....	M	w 11.00	.....	.....	10	60
<i>Wire Fence Mfg.—</i>						
Bookkeeper.....	M	y 1,800.00	.....	.....	10	60
Engineer.....	M	w 10.50	.....	.....	12	75
Foreman.....	M	y 1,000.00	.....	.....	10	60
Laborers.....	M	w 9.00	.....	.....	10	60
Machine men.....	M	w 20.00	.....	w 9.00	10	60
Salesmen.....	M	y 1,200.00	y 900.00	.....	10	60
Stenographer.....	F	m 40.00	.....	.....	10	60
Superintendent.....	M	y 1,200.00	.....	.....	10	60

SCOTT COUNTY.

<i>Confectionery Mfg.—</i>						
Boys.....	M	w 4.00	w 3.00	.....	10	60
Bookkeeper.....	M	m 40.00	.....	.....	10	60
Candy maker.....	M	w 15.00	.....	w 10.00	10	60
Engineer.....	M	w 12.50	.....	.....	12	75
Girls.....	F	w 4.00	w 3.00	.....	10	60

GRADED WAGES—CONTINUED.

SCOTT COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Crackers and Cakes—</i>						
Bakers.....	M	w \$ 12. 00			10	60
Bookkeeper.....	M	m 75. 00			10	60
Box maker.....	M	w 10. 00			10	60
Clerks.....	M	m 40. 00			10	60
Engineer.....	M	m 55. 00			12	75
Foreman.....	M	w 27. 00	w \$ 16. 50		10	60
Mixers.....	M	w 12. 00			10	60
Packers.....	M & F	w 5. 00		w \$ 8. 50	10	60
Shipping clerk.....	M	m 40. 00			10	60
Superintendent.....	M	m 200. 00			10	60
a Teamster.....	M	m 75. 00			12	75
Timekeeper.....	M & F	m 50. 00			10	60
<i>Carriages and Buggies Mfy.—</i>						
Blacksmith.....	M	d 2. 50			10	60
Blacksmith helpers.....	M	d 1. 50			10	60
Bookkeeper.....	F	w 6. 00			10	60
Carriage maker.....	M	d 3. 00	d 2. 00		10	60
Engineer.....	M	w 10. 50			12	75
Foreman.....	M	d 3. 00			10	60
Painters.....	M	d 2. 50			10	60
Superintendent.....	M	m 100. 00			10	60
<i>Gas Mfy.—</i>						
Engineers.....	M	m 55. 00			12	84
Firemen.....	M	m 60. 00			12	84
Gas man.....	M	m 55. 00			10	60
Manager.....	M	m 75. 00			10	60
<i>Glucose Mfy.—</i>						
Boys.....	M	d 1. 25	d 1. 00	d .70	12	72
Bookkeeper.....	M	m 45. 00			10	60
Clerks.....	M	m 90. 00	m 40. 00	m 80. 00	10	60
Coal passers.....	M	d 1. 50			10	60
Engineers.....	M	m 85. 00	m 65. 00		12	75
Firemen.....	M	d 2. 15	d 1. 90	d 1. 75	12	75
Foremen.....	M	m 90. 00	m 80. 00	m 50. 00	12	72
Laborers.....	M	d 1. 65	d 1. 60	d 1. 50	10	60
Shipping clerks.....	M	m 90. 00	m 70. 00	m 50. 00	12	72
Women.....	F	d 1. 20			12	72
<i>Harness and Collars Mfy.—</i>						
Bookkeeper.....	M	m 70. 00			10	60
Clerks.....	M	w 10. 00			10	60
Collar makers.....	M	w 12. 00			10	60
Foreman.....	M	w 18. 00			10	60
Harness makers.....	M	w 13. 50	w 12. 00		10	60
<i>Liquors (malt) Mfy.—</i>						
Bookkeepers.....	M & F	m 75. 00	m 60. 00	m 50. 00	10	60
Bottlers.....	M	w 10. 00			10	60
*Brewers.....	M	w 15. 00			8	48
*Carpenters.....	M	d 2. 50			8	48
*Coopers.....	M	d 2. 50			8	48
Engineers.....	M	m 100. 00			12	75
Firemen.....	M	w 12. 00	w 10. 00		12	75
Foremen.....	M	y 1,500. 00		y 750. 00	10	60
General manager.....	M	y 1,800. 00			10	60
Label Boys.....	M	d 1. 00			10	60
*Painters.....	M	d 2. 50			8	48
Stable men.....	M	w 11. 00			10	60
Teamsters.....	M	m 60. 00			12	75
Yard men.....	M	w 10. 00			10	60

a This rate includes team furnished.

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

SCOTT COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Macaroni and Vermicelli Mfg.—</i>						
Bookkeeper.....	M	m \$ 50.00			10	60
Engineer.....	M	w 18.50			12	75
Foreman.....	M	w 18.00			10	60
Laborers.....	M	d 1.50			10	60
Packer girls.....	F	w 5.00	w \$ 4.00	w \$ 3.00	10	60
Superintendent.....	M	m 100.00			10	60
<i>Metal Wheels Mfg.—</i>						
Bookkeepers.....	M	y 1,600.00			10	60
Clerk.....	M	d 2.50	d 2.00		10	60
Engineers.....	M	d 2.75			12	75
Firemen.....	M	d 2.15			12	75
Foremen.....	M	d 3.00			10	60
Hub machine men.....	M	d 2.70			10	60
Laborers.....	M	d 1.75	d 1.50		10	60
Rl. eters.....	M	w 14.50			10	60
Shouldering mach-men.....	M	d 1.95			10	60
Superintendent.....	M	y 2,400.00			10	60
Truers.....	M	d 2.65			10	60
Welders.....	M	d 3.12			10	60
<i>Paints Mfg.—</i>						
Bookkeeper.....	M	d 4.00	d 2.50	d 1.50	10	60
Box maker.....	M	d 1.00			10	60
Engineer.....	M	d 2.00			12	75
Foreman.....	M	d 3.00			10	60
Grinders.....	M	d 2.00			10	60
Helpers.....	M	d 1.25			10	60
Superintendent.....	M	d 5.00			10	60
Women.....	F	d 1.00		d .50	10	60
<i>Paper Boxes Mfg.—</i>						
Box makers (girls).....	F	w 4.00			8½	51
Assistant foreman.....	M	w 7.50			8½	51
<i>Pearl Buttons Mfg.—</i>						
Backers.....	F	w 5.00			10	60
Bookkeepers.....	M	m 100.00			10	60
Button sorters.....	F	w 4.80	w 4.00		10	60
Cadders.....	F	w 5.00			10	60
Clerks.....	M	w 8.00			10	60
Cutters.....	M	w 9.50	w 9.00		10	60
Drillers.....	F	w 5.00	w 3.00		10	60
Engineer.....	M	w 14.00	w 10.00		12	75
Facers.....	F	w 5.00			10	60
Foremen.....	M	w 18.00	w 16.00	w 14.00	10	60
Forewomen.....	F	w 5.50			10	60
Shell sorters.....	M	d 1.75	d 1.50	d .50	10	60
Superintendent.....	M	m 100.00			10	60
<i>Pop and Mineral Water Mfg.—</i>						
Bottler.....	M	w 12.00	w 10.00	w 9.00	10	60
Boys.....	M	w 6.00			10	60
Bookkeeper.....	M	m 70.00			10	60
Drivers.....	M	w 12.00			10	60
Engineer.....	M	w 12.00			12	75
Foreman.....	M	w 15.00			10	60
Hostler.....	M	m 40.00			10	60

GRADED WAGES—CONTINUED.

SCOTT COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Steel Cars and Wagons Mfg. —</i>						
Bookkeeper.....	M	y \$1,400.00			10	60
Clerks.....	M	m 75.00	m \$ 50.00		10	60
Draughtsman.....	M	m 90.00	m 60.00		10	60
Draughtsman's apprentice.....	M	w 5.00			10	60
Engineer.....	M	m 100.00	m 60.00		12	75
Firemen.....	M	d 2.15			12	75
Foremen.....	M	w 22.00	w 21.00	w \$ 18.00	10	60
Handy men.....	M	d 2.20			10	60
Helpers.....	M	d 1.80	d 1.60		10	60
Laborers.....	M	d 1.80	d 1.60	d 1.50	10	60
Machinists.....	M	d 3.00	d 2.50		10	60
Machinists' apprentices.....	M	w 6.00	w 5.00	w 4.00	10	60
Machine men.....	M	d 1.70			10	60
Pattern makers.....	M	d 3.20	d 2.50	d 2.00	10	60
Pattern makers' apprentices.....	M	w 6.00	w 5.00	w 4.00	10	60
Press hands.....	M	w 18.00	w 12.00	w 9.00	10	60
Shipping clerk.....	M	w 15.00			10	60
Stenographers.....	F	w 10.00			8	48
Stock clerk.....	M	w 15.00			10	60
Superintendent.....	M	y 1,800.00	y 1,200.00		10	60
Timekeeper.....	M	w 18.00			10	60
<i>Tin Cans Mfg. —</i>						
Balers.....	M	d 1.75			10 1/2	62 1/2
Boys.....	M	d .75			10 1/2	62 1/2
Clerks.....	M	m 85.00		m 35.00	10 1/2	62 1/2
Engineers.....	M	m 65.00			12	75
Firemen.....	M	w 12.00			12	75
Floater.....	M	d 2.25			10 1/2	62 1/2
Foremen.....	M	m 86.66	m 55.00	m 45.00	10 1/2	62 1/2
Girls.....	F	d .75			10 1/2	62 1/2
Laborers.....	M	d 1.50			10 1/2	62 1/2
Press hands.....	M	d 2.25			10 1/2	62 1/2
Seamers.....	M	d 2.00			10 1/2	62 1/2
Superintendent.....	M	y 1,500.00			10 1/2	62 1/2
Testers.....	M	d 1.50			10 1/2	62 1/2
Time keeper.....	M	m 40.00			10 1/2	62 1/2
Toolmaker.....	M	d 8.25	d 3.00	d 2.75	10 1/2	62 1/2
<i>Washing Machines Mfg. —</i>						
Assemblymen.....	M	d 1.50			10	60
Bookkeeper.....	M	w 17.00			10	60
Boys.....	M	w 5.00	w 3.50	w 2.00	10	60
Clerk.....	F	w 6.00			8	48
Cooper.....	M	d 2.80			10	60
Drill men.....	M	w 6.00			10	60
Driver.....	M	w 10.00			10	60
Engineer.....	M	w 10.00			12	75
Foremen.....	M	w 18.00			10	60
Joiner.....	M	d 2.25			10	60
Lathe hands.....	M	w 12.00			10	60
Painters.....	M	d 1.50			10	60
Sawyers.....	M	w 10.00	w 9.00		10	60
Superintendent.....	M	w 18.00			10	60

GRADED WAGES—CONTINUED.

WAPELLO COUNTY.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Agricultural Implements Mfg.—</i>						
Blacksmiths	M	d \$ 2.00			10	60
Blacksmiths' helpers	M	d 1.40			10	60
Bookkeeper	M	m 80.00	m \$ 75.00		10	60
Clerks	M	m 60.00	m 50.00		10	60
Core makers (boys)	M	d .75			10	60
Engineers	M	m 75.00	m 60.00		12	75
Erectors	M	d 1.40			10	60
Firemen	M	d 1.50			12	75
Foremen	M	m 85.00	m 78.00	m \$ 65.00	10	60
Laborers	M	d 1.25			10	60
Machinists	M	d 2.50			10	60
Machinists' helpers	M	d 1.50			10	60
Molders	M	d 2.50			10	60
Painters	M	d 1.50			10	60
Salesmen (traveling)	M	m 100.00			10	60
Stenographer	F	m 82.50			10	60
Superintendent	M	m 150.00		m 90.00	10	60
Teamsters	M	m 40.00			12	75
Timekeeper	M & F	m 85.00	m 80.00		10	60
Woodworkers	M	d 1.50			10	60
<i>Cigars Mfg.—</i>						
Bookkeepers	M	m 78.00	m 55.00	m 40.00	10	60
Cigar makers	M & F	w 10.50	w 7.50	w 5.00	10	60
Foremen	M	w 21.00	w 17.00	w 13.00	10	60
Salesmen (traveling)	M	m 100.00	m 65.00	m 60.00	10	60
Strippers	M & F	w 8.00	w 2.50	w 2.00	10	60
<i>Cigars Mfg.—</i>						
*Cigar makers	M	w 15.00			8	48
*Cigar maker apprentices	M	d 1.75	d 1.25	d .50	8	48
*Foremen	M	w 25.00			8	48
*Strippers	M & F	w 6.00	w 4.00	w 3.00	8	48
<i>Confectionery Mfg.—</i>						
Bookkeeper	M	m 65.00			10	60
Candy maker	M	w 19.00	w 16.00	w 12.00	10	60
Candy maker helpers	F & M	w 7.50	w 4.00	w 3.50	10	60
Chocolate dippers	F	w 7.50	w 6.00	w 4.50	10	60
City salesmen	M	m 85.00			10	60
Clerks	M	w 8.00			10	60
Engineers	M	w 12.00			12	75
Firemen	M	w 9.00			12	75
General manager	M	m 75.00			10	60
Girls	F	w 7.00	w 4.50	w 2.50	10	60
Salesmen (traveling)	M	m 90.00			10	60
Shipping clerk	M	w 10.00			10	60
Stenographer	M	m 40.00			10	60
<i>Electric Power—</i>						
*Conductors	M	d 1.68			12	72
*Electrical workers	M	m 50.00			9	54
Engineers	M	m 60.00	m 55.00		12	72
Firemen	M	m 55.00	m 42.10		12	72
Foremen	M	m 50.00			12	72
Ground men (diggers)	M	d 1.50			10	60
Machinists	M	m 65.00			10	60
*Motorneers	M	d 1.92			12	72
Oilers	M	m 45.00			12	72
Superintendent	M	y 1,000.00			12	72

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

WAPELLO COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium	Low.	Day.	Week.
Laundry—						
Bookkeeper.....	F	w \$ 7.50				
Drivers.....	M	w 12.00	w \$ 10.00		8½	51
Engineers.....	M	w 12.00			10	66
Foremen.....	M	w 20.00			8½	51
Helpers.....	F	d .75			8½	51
Ironers.....	F	w 7.00	w 6.00		8½	51
Manglers.....	F	w 5.00	w 4.50		8½	51
Starchers.....	F	w 7.50		w \$ 4.50	8½	51
Superintendent.....	M	w 25.00			8½	51
Washmen.....	M	w 12.00	w 7.50		8½	51
Machinery Supplies Mfg.—						
Blacksmiths.....	M	d 2.75		d 2.00	10	60
Blacksmiths' helpers.....	M	d 1.50	d 1.40		10	60
Bookkeepers.....	M	y 900.00	y 600.00		10	60
Drill pressmen.....	M	d 1.75			10	60
Engineers.....	M	m 50.00	m 42.00		12	75
Firemen.....	M	m 45.00	m 40.00		12	75
Foremen.....	M	y 1,820.00	y 900.00		10	60
Foundry helpers.....	M	d 1.45			10	60
Handy men.....	M	d 1.50			10	60
Machinists.....	M	d 2.75	d 2.50	d 2.25	10	60
Machinists' helpers.....	M	d 1.50	d 1.30		10	60
Molders.....	M	d 2.75			10	60
Pattern makers.....	M	d 8.50	d 2.25	d 2.00	10	60
Salesmen (traveling).....	M	m 75.00			10	60
Stenographer.....	F	y 200.00			9	54
Superintendent.....	M	y 1,600.00	y 1,000.00		10	60
Timekeeper.....	M	m 25.00			10	60
Mechanics' Tools Mfg.—						
Bookkeepers.....	F	w 8.50			10	60
Engineers.....	M	m 60.00			12	75
Filers.....	M	w 18.20			10	60
Graduators.....	M	w 20.00			10	60
Grinders.....	M	d 2.10			10	60
Inventor.....	M	d 2.75			10	60
Jointer.....	M	d 2.06			10	60
Laborers.....	M	d 2.00	d 1.50		10	60
Machinists.....	M	d 8.85	d 8.00		10	60
Nickeler.....	M	d 2.00			10	60
Polisher.....	M	d 2.00			10	60
Stamper.....	M	d 2.00			10	60
Straightener.....	M	d 1.90			10	60
Superintendent.....	M	m 100.00			10	60
Welder and roller.....	M	d 2.00			10	60
Mining Machinery and Supplies Mfg.—						
Bookkeeper.....	M	y 900.00			9	54
*Bull-dozer.....	M	d 1.80			9	54
*Engineer.....	M	d 2.10			11	66
*Foremen.....	M	m 75.00			9	54
*Hammer men.....	M	a d 4.00	d 2.25	d 2.00	9	54
*Handy men.....	M	d 1.75			9	54
*Machinists.....	M	d 2.25			9	54
Solderers.....	F	a-d 1.25	d 1.00		9	54
Stampers.....	F	d 1.25	d 1.00		9	54

a Maximum piece work earnings.

* Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

WAPELLO COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Packing (Meat).—</i>						
Bookkeepers.....	M	m \$100.00	m \$ 70.00	m \$ 45.00	10	80
Butchers.....	M	d 8.50	d 2.75	d 2.00	10	80
Cellar men.....	M	d 2.50	d 2.25	d 2.00	10	80
Clerks (shipping).....	M	m 65.00	m 45.00	m 17.00	10	80
Clerks (office).....	M	m 150.00	m 90.00	m 70.00	10	80
Engineers.....	M	w 34.50	w 16.50	w 12.00	12	75
Firemen.....	M	w 15.00	w 12.00	.....	12	75
Foremen.....	M	w 28.75	w 17.25	w 12.00	10	80
Laborers.....	M	d 1.75	d 1.50	d 1.25	10	80
Packers.....	M	d 2.50	.....	d 2.00	10	80
Superintendents.....	M	m 250.00	.....	m 208.33	10	80
Timekeepers.....	M	w 28.00	w 8.05	w 6.90	10	80
<i>Shirts and Overalls Mfg.—</i>						
*Cutters.....	M	m 80.00	m 45.00	.....	9	54
*Seamstresses.....	F	d 1.25	d 1.10	d 1.00	9	54
*Seamstress apprentices.....	F	d .65	.....	.....	9	54
<i>Specialties (Hardware) Mfg.—</i>						
Girls.....	F	d 1.00	d .80	d .50	10	80
Handy men.....	M	d 1.75	.....	.....	10	80
Machinists.....	M	d 2.25	.....	.....	10	80
<i>Wholesale Grocery.—</i>						
Clerks.....	M	m 75.00	m 40.00	.....	9½	57
Laborers.....	M	m 40.00	.....	.....	9½	57
Salesmen (traveling).....	M	m 100.00	m 50.00	.....	9½	57
Stenographer.....	F	m 40.00	.....	.....	9½	57

WOODBURY COUNTY.

<i>Bakery—</i>						
*Bakers.....	M	w \$ 18.00	w 16.00	w 18.00	10	80
*Bakers' helpers.....	M	w 10.00	.....	.....	10	80
Boys.....	M	w 6.00	.....	.....	10	80
Drivers.....	M	w 12.00	.....	.....	10	80
Girls.....	F	w 8.00	w 6.00	.....	10	80
<i>Brass Castings and Plating—</i>						
Machinists.....	M	w 16.50	.....	.....	10	80
Molders.....	M	w 15.00	.....	.....	10	80
Platers.....	M	w 13.50	.....	.....	10	80
<i>Cigars Mfg.—</i>						
*Cigar makers.....	M	w 25.00	w 16.00	w 12.00	8	48
*Foremen.....	M	w 18.00	.....	.....	8	48
Salesmen.....	M	m 100.00	m 70.00	.....	8	48
*Strippers.....	M	w 5.00	w 4.00	w 2.75	8	48
<i>Confectionery Mfg.—</i>						
Bookkeeper.....	M	m 75.00	.....	.....	10	80
Candy maker.....	M	w 15.00	w 12.00	w 10.00	10	80
Chocolate dippers.....	F	w 10.00	w 9.00	w 6.00	10	80
Clerks.....	M	m 50.00	.....	.....	10	80
Engineers.....	M	m 75.00	.....	.....	12	75
Fireman.....	M	m 50.00	.....	.....	10	80
Packers.....	M	w 10.00	.....	.....	10	80

*Wage scale as per union agreement.

GRADED WAGES—CONTINUED.

WOODBURY COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, m; Week, W; Day, D; Hour, H			Hours Worked per	
		High.	Medium.	Low.	Day.	Week.
<i>Confections Mfg.—</i>						
Bookkeepers	M	w \$ 20.00	w \$ 15.00		10	60
Candy makers	M	d 8.00	d 2.50	d \$ 2.50	10	60
Candy makers' helpers	M	w 9.00		w 5.00	10	60
Carton makers	F	w 5.00			10	60
Chocolate dippers	F	w 6.00		w 4.50	10	60
Engineers	M	w 20.00			12	75
Firemen	M	w 10.75			12	75
Foreman	M	w 25.00			10	60
Machine men	M	d 2.50		d 2.00	10	60
Packers	M	w 7.00	w 6.00	w 5.00	10	60
Stenographers	F	w 15.00			10	60
Tim keeper	M	w 15.00			10	60
Warehouse men	M	w 15.00		w 9.00	10	60
Watchman	M	d 1.75			12	84
Wappers	F	w 5.00			10	60
<i>Laundry—</i>						
Bookkeeper	M	m 50.00			10	60
Drivers	M	w 12.00			10	60
Engineers	M	w 14.00			12	75
Girls	F	d 1.00			10	60
Hand washwomen	F	d 1.20			10	60
Ironers	F	d 1.20			10	60
Washman	M	w 10.00			10	60
<i>Linseed Oil and Cake Mfg.—</i>						
Bookkeeper	M F	m 100.00	m 75.00		12&9	72&54
Engineers	M	d 8.00	d 2.40		12	75
Firemen	M	d 2.40			12	75
Laborers	M	d 1.92			12	72
Pressmen	M	d 1.92			12	72
Stenographer	F	m 60.00			9	54
Watchman	M	m 50.00			12	84
<i>Mattress and Upholstering—</i>						
Bookkeeper	M	w 18.00			10	60
Boys	M	w 5.00			10	60
Fillers	M	w 7.50	w 6.00		10	60
Foremen	M	w 16.00	w 15.00		10	60
Mattress makers	M	w 15.00	w 12.00	w 10.00	10	60
Salesmen	M	y 980.00	y 900.00		10	60
Shipping clerk	M	w 18.00			10	60
Teamster and team	M	w 16.00			12	75
Tick sewers	F	w 12.00	w 9.60	w 7.50	10	60
<i>Oats and Corn Meal—</i>						
Bookkeeper	M	y 900.00			10	60
Clerks	M	y 70.00			10	60
Engineer	M	y 900.00			12	75
Firemen	M	d 2.25	d 1.80		10	60
Millers	M	d 2.40	d 2.00		10	60
Millers' helpers	M	d 1.80			10	60
Millwright	M	d 8.50	d 8.00		10	60
Packers	M	d 2.00			10	60
Stenographer	F	m 80.00			10	60
Superintendent	M	y 1,800.00			10	60
Warehouse men	M	d 1.75	d 1.50		10	60

GRADED WAGES—CONTINUED.

WOODBURY COUNTY—CONTINUED.

Kind of Business and Division of Occupation.	Sex.	By Year, Y; Month, M; Week, W; Day, D; Hour, H.			Hours Worked per	
		High.	Medium.	Low.	Day.	Week
<i>Overalls and Jackets Mfg.—</i>						
Cutters	M	w \$ 12.00			10	60
Draughtsman	M	w 25.00			10	60
Foreman	M	w 25 00	w \$ 15.00		10	60
Handy man	M	w 8.00			10	60
Machine operators	F	w 12.00	w 9.00	w \$ 5.00	10	60
Machinists	M	w 10.00			10	60
Marker	M	w 10.00			10	60
Pressers	M	w 10.00			10	60
Salesmen	M	y 1,500.00	y 1,200 00	y 900.00	10	60
Sorter	M	w 8.00			10	60
Spreaders	M	w 8.00			10	60
<i>Soap Mfg.—</i>						
Bookkeeper	M	m 60.00			10	60
Clerks (shipping)	M	m 45.00			10	60
Engineer	M	m 65.00			12	75
Foreman	M	m 65.00			10	60
Girls	F	w 5.00			10	60
Handy men	M	m 45.00			10	60
Helpers	F	w 5.00			10	60
Pressers	M	d 2.00			10	60
Salesmen	M	y 1,200.00	y 1,000 00		10	60
Soapmakers	M	m 100.00			10	60
Toilet soapmakers	M	m 50.00			10	60
Wrapper girls	F	w 5.00	w 4 50		10	60
<i>Street Railway—</i>						
Conductors (extra men)	M	h .16			12	84
Conductor (1st year regular)	M	h .17			12	84
Conductors (2d year regular)	M	h .173			12	84
Conductors (3d, 4th, 5th year)	M	h .18			12	84
Conductors (5 years and after, regular)	M	h .19			12	84
Motormen (extra men)	M	h .16			12	84
Motormen (1st year regular)	M	h .17			12	84
Motormen (2d year regular)	M	h .173			12	84
Motormen (3d, 4th, 5th year regular)	M	h .18			12	84
Motormen (5 years and after, regular)	M	h .19			12	84

NEW INDUSTRIES FOR IOWA.

ESTABLISHED IN IOWA SINCE 1900 AND PROFIT- ABLE LOCATION FOR NEW INDUSTRIES.

In meeting the requirements of chapter 8, section 2470 of the Code which provides that "the Commissioner shall collect information of and report on sites offering natural or acquired advantages for the profitable location and operation of different branches of industry, and impart such information as may tend to induce the location of mechanical and producing plants within the state to the end that it shall increase the productions and consequent employment of producers," the following circular letter was sent to representative men in the state, embracing legislators, city officials, commercial clubs and a large number of newspapers, the number corresponding was considerably above that of any previous report, indicating that the people of the state consider the inquiry a valuable one.

COPY OF CIRCULAR LETTER.

DES MOINES, IOWA.

Mr.....

....., Iowa.

DEAR SIR—A clause in the law governing the Bureau of Labor Statistics directs the Commissioner to collect, compile and publish in his biennial reports to the governor such information as may be considered of value for expanding the industrial interests of the state.

It is especially directed to report the localities within the state that offer natural or acquired advantages for the profitable location and operation of new and diversified branches of industry as shall tend to the installation of producing plants, increase opportunities for employment and add to the general prosperity of the state.

In order to render the greatest service to your community and realizing that the position you occupy gives you an insight and affords you the possibility of making an accurate statement as to the needs, the opportunities, and the advantages possessed by your locality, and that any information you would furnish would be of the most reliable character.

For this purpose the accompanying blank is sent you and your valuable co-operation solicited so as to give your home the very best representation.

Any additional information on the subject you consider necessary to report may be elaborated upon in a separate statement.

Thanking you in advance for such favors conferred,

Yours respectfully,

EDWARD D. BRIGHAM, Commissioner.

In connection with the above circular letter the following blank asking specific information was enclosed:

STATE OF IOWA.
BUREAU OF LABOR STATISTICS.
SCHEDULE NO. 5.

NEW INDUSTRIES.

ESTABLISHED IN IOWA SINCE 1900, AND PROFITABLE LOCATIONS FOR NEW INDUSTRIES.

1. Locality.....County.....2. Number and names of manufacturing industries established in locality since 1900.....3. Number and names of business houses, wholesale and retail, established in locality since 1900.....4. Number and kind of new industries, manufacturing or mercantile, desired in your locality.....5. What general advantages either natural or acquired exist in your locality for special manufactures or other business? 6. If your citizens or the municipal corporation offers inducements for the establishment of new manufacturing industries or business houses to prospective investors, please state specifically what such inducements would be.....

The Iowa Commission to the Louisiana Purchase Exposition, through their secretary, requested the Commissioner to give them some assistance in the work of securing a creditable exhibit of the mechanical and manufactured products of the state and consequently the matter was taken up personally with the manufacturers during factory inspection and the gathering of statistics, and in this way many valuable exhibits were secured and at the same time the new industry blanks were mentioned and attention of those interested was directed to the benefits of this chapter of the report. The secretary issued a circular letter which was inclosed

with blanks sent out by the Bureau and in this manner about 4,500 of these circulars were distributed. In return for this assistance the Iowa Commission kindly furnished one clerk to the Bureau for a period of two months. It is believed that on account of the interest taken and the opportunity afforded at the Louisiana Purchase Exposition that this chapter will be especially helpful as a means of inducing investors to locate new industries within the state. So far as correspondence with parties in other sections of the United States is concerned the Commissioner has replied to all such inquiries that have been made, and directed them to those sections of the state offering the best inducements for the desired requirements. I would suggest that some appropriation be provided for the purpose of publishing a pamphlet or bulletin setting forth the natural or acquired advantages and what if any inducement is offered by localities to investors and manufacturers which could be published at moderate expense. The splendid water powers of Iowa, the inexhaustible coal supply of central and southern Iowa and the bountiful clay and gypsum deposits distributed throughout the state could be described. There are also numerous other natural advantages that if brought out in such a bulletin would, I am confident, be the means of inducing the location of additional producing plants within the state. The list of some 4,500 employers and manufacturers of the state together with the business they are engaged in could be included in this bulletin and those who wish to patronize them could locate them, and again, if each manufacturer was aware of the location of some other manufacturer who produced an article he desired to purchase, it would be the means of stimulating the patronage of home industries, and perhaps discourage the practice of sending outside the state for articles that are manufactured within the state that oftentimes are of a better quality and at a cheaper figure than those from abroad.

This idea has been constantly kept in mind in the work of factory inspection and it is believed that a moderate expenditure of money in support of that argument would be a wise measure for the reason that in not one single instance where this was brought to the notice of the manufacturer or dealer did they fail to express approval of the idea and indicate a desire to secure a list of the

different manufactories and their location in the state in order that home industries might be given the preference whenever possible.

This chapter is divided into four parts.

Part I. Showing the increase of business houses and manufacturing industries since 1900.

Part II. Setting forth the advantages existing in the separate localities and the inducements that might be expected to encourage the location of industries in their sections.

It will be observed how loyally the inquiries have been responded to and how completely each correspondent comprehends the importance of making all the essential commercial advantages clearly exhibited.

Part III—Exhibit 1. Consists of a careful analysis from the industrial totals furnished by the United States Census Bureau in the twelfth report and for the year 1900 for the state of Iowa embracing the eighteen counties in the state which have the largest industrial development. Part III—Exhibit 2 is an analysis of thirty-five of the important industries and those which are considered particularly adaptable to economic development in the profitable business accomplished and what might be possible to still further establish and encourage among our people in order to fulfill the wise provision of the section of law governing the Bureau as here quoted.

“The Commissioner shall collect information of and report on sites offering natural or acquired advantages for the profitable location and operation of different branches of industry; he shall by correspondence with interested parties in other parts of the United States, impart to them such information as may tend to induce the location of mechanical and producing plants within the state, together with such other information as shall tend to increase the production, and consequent employment of producers.”

Part IV. Consists of a special report on the many unused and undeveloped water powers of the state some of which are deserving more than passing attention.

It can easily be seen that they will play an important part in the development of manufactures in the state for the reason that electrical power can be developed cheaply by means of small water powers.

NEW INDUSTRIES—PART I.

Number and name of manufacturing industries and business houses—wholesale and retail—established since 1900.

ADAIR COUNTY.

ADAIR.—Flour mill, cigar factory, dry goods store, racket store, clothing store, general merchandise (two).

GREENFIELD.—Pressed brick plant—capacity 10,000 per day, flour mill, capacity fifty barrels per day, department store, clothing store, general stores (two), harness shop.

ALLAMAKEE COUNTY.

LANSING.—Three button factories.

APPANOOSE COUNTY.

CENTERVILLE.—Cream separator manufactory, cigar factory, machine shop, grocery store, clothing store, bakery, wholesale produce, drug store, coal and coke company, coal mine.

MOULTON.—Two hardware stores, furniture store, implement store, grocery store, savings bank, wholesale poultry store.

MYSTIC.—Cigar factory, four blacksmith shops, three lunch rooms, two restaurants, two shoe shops, one harness shop, furniture store, lumber yard, printing office, two clothing stores, two bakeries, one mill, two jewelry stores.

BENTON COUNTY.

VINTON.—Wagon and buggy shop, electrical supply house, wholesale and retail cigars, steam bakery.

BOONE COUNTY.

BOONE.—Cereal mill, brick and tile company, department store, drug store.

BREMER COUNTY.

WAVERLY.—Clothing store, restaurant and bakery, hardware store, grocery store, harness and saddlery store.

BUCHANAN COUNTY.

INDEPENDENCE.—Wholesale cigars, cafe, grocery store.

BUENA VISTA COUNTY.

MARATHON.—Wholesale butter and egg store, wholesale lime, stucco and cement.

SIoux RAPIDS.—Brick and tile factory, two general merchandise stores, newspaper, bank, two restaurants, two hotels, clothing store, grocery store, two barber shops, blacksmith shop.

BUTLER COUNTY.

ALLISON.—Creamery, bank, grain company, opera house.

PARKERSBURG.—One additional creamery.

CALHOUN COUNTY.

LAKE CITY.—Creamery.

LOHEVILLE.—Bakery, general stores (three), jewelry store, furnishing, boots and shoes, flour mill.

ROCKWELL CITY.—Flour mill—Capacity 100 barrels per day, canning factory—capacity 75,000 cans per day; brick and tile factory—capacity 20,000 each per day; lumber yard, shoe stores (two), grocery store, meat market, restaurant, watchmaker.

CARROLL COUNTY.

COON RAPIDS.—Clothing store, grocery store, newspaper office.

CASS COUNTY.

ATLANTIC.—One creamery, one chicken ranch, one lightning rod firm, one hardware store, one boot and shoe store.

GRISWOLD.—Four new general stores, one racket store.

CEDAR COUNTY.

WEST BRANCH.—Retail grocery, hardware store, butcher shop, livery and sale stable, electric light company.

CERRO GORDO COUNTY.

MASON CITY.—Baking powder manufacturing company, broom factory, rug factory, brick and tile factory, two cigar factories, two dry goods stores, two grocery stores, two oil companies (distributors), one lumber yard, one music store, drug store, one sheet metal and cornice shop.

CHEROKEE COUNTY.

CHEROKEE.—Cigar factory, wholesale bakery, wholesale fruit house, cold storage plant, five other new business houses whose business were not reported.

CHICKASAW COUNTY.

NASHUA.—Woolen mills, creamery company, farm implement company, jewelry store, furniture store, general merchandise store, grocery store, drug store, bakery.

NEW HAMPTON.—Retail grocery, branch house dressed poultry.

CLAY COUNTY.

SPENCER.—Flax tow mill, brick and tile factory, one department store, one general store.

CLAYTON COUNTY.

ELKADER.—Cigar factory, meat market, grocery store.

GUTTENBERG.—Hard wood saw mill, drug store, harness shop.

CLINTON COUNTY.

CLINTON.—Cream separator and engine works, one woodwork factory, button factory, broom factory, flour and feed mill, lime and brick yard, five grocery stores, three meat markets, one harness shop, two cigar and tobacco stores, three bakeries and confectioneries, two boot and shoe stores, two wholesale tobacco and cigars, two drug stores, one fish and oyster house, one hardware store, one music store, one tea, coffee and spice store, one wall paper, paints etc.

CRAWFORD COUNTY.

DENISON.—One ticket company, one creamery, one art store, one dry goods store, one grocery, photographer, bowling alley, meat market.

DECATUR COUNTY.

LAMONI.—Creamery, general store, implement store.

LEON.—Poultry packing house.

VAN WERT.—Harness shop, hardware store, general machine shop, implement store, clothing store, bank, newspaper, photograph gallery, telephone company, barber shop, two restaurants, lumber yard.

DELAWARE COUNTY.

EARLVILLE.—Creamery, general merchandise store, restaurant and grocery.

DES MOINES COUNTY.

BURLINGTON.—Two broom factories, one pearl button factory, two novelty manufacturing companies, one planing mill, two dry goods stores, one drug store, one bakery, two coal yards, two grocery stores.

DICKINSON COUNTY.

SPIRIT LAKE.—Provision and butter, cold storage company.

DUBUQUE COUNTY.

DUBUQUE.—Cigar factory, grain bag works, overalls factory, awning factory, pearl button factory, shoe factory, carriage factory, church furnishings, coffin trimmings factory, stamping and enameling company, machine shop, one fancy grocery, church goods, dry goods, electrical supply store, pumps and plumbers' supply store.

EPWORTH.—Harness shop.

EMMET COUNTY.

ESTHERVILLE.—Tub factory, pop factory, cigar factory, candy factory, wholesale grocery store, implement store, general merchandise store.

FAYETTE COUNTY.

CLERMONT.—Flour mill, brickyard, meat market, grocery, hardware store, restaurant.

OELWEIN.—General machine shops, locomotive erecting works, car shops, general repair railway shops, foundry, four clothing stores, two dry goods stores, five grocery stores, three hardware stores, three drug stores.

FLOYD COUNTY.

CHARLES CITY.—Gasoline engine manufactory.

FREMONT COUNTY.

HAMBURG.—Creamery company, canning factory, one cereal mill, two grist mills, three brick plants, one broom factory, one sawmill for native lumber, two clothing stores, three drug stores, three grocery stores, two racket stores, one bank, two second hand stores, three confectioners, two millinery stores.

GUTHRIE COUNTY.

GUTHRIE CENTER.—One clothing store, one grocery store, one feed store, one book and music store.

HAMILTON COUNTY.

WEBSTER CITY.—Felt shoe factory, steel radiator factory, canning factory, one clothing store, one grocery store, one drug store, one bakery, one cigar factory.

HANCOCK COUNTY.

BRITT.—Brick and tile plant, creamery company, cigar factory, flour mill.

HARDIN COUNTY.

HUBBARD.—Two general stores, one restaurant.

IOWA FALLS.—One buggy manufacturing company, one bank fixtures company, one tank and end gate factory, one department store, one shoe store, one clothing store, one lumber yard, one furniture store.

RADCLIFFE.—Two banks, one investment company.

HARRISON COUNTY.

MISSOURI VALLEY.—One paper casket company.

HOWARD COUNTY.

CRESCO.—Electric light and heating company, stump pulling machinery factory, foundry, cheese factory, cigar factory, grocery store, dry goods store.

JACKSON COUNTY.

MAQUOKETA.—School furniture company, dry goods company.

JASPER COUNTY.

COLFAX.—One bottling plant (mineral water), three coal mines, one bakery, one furniture and undertaking store, one photograph gallery.

NEWTON.—Incubator factory, refrigerator factory, automatic scale factory, weather strip factory, one feed store, two clothing stores, one shoe store, one restaurant.

JEFFERSON COUNTY.

FAIRFIELD.—One glove and mitten factory, one brush factory, one sign factory, one handle factory, ten retail stores.

JOHNSON COUNTY.

IOWA CITY.—One brewing company, one soap factory, one novelty company, one steel tank factory, one four-row corn planter factory, one machine shop, one pottery plant, one cigar factory, six general stores, one department store, two millinery stores, one book store, one grocery store, one restaurant, one cigar store (wholesale), one manufacturing jeweler, flour mill.

JONES COUNTY.

ANAMOSA.—Cooperage company, two poultry firms.

KEOKUK COUNTY.

HEDRICK.—One slate bank one general store, one national bank, one commercial mill, one feed mill, one millinery store, one jewelry store.

WHAT CHEER.—One clothing store, one restaurant.

KOSSUTH COUNTY.

ALGONA.—One creamery supply factory, one soda water factory, one stock food factory, one vinegar works, one ice cream and candy factory, one hardwood lumber company, one milling company, one grocery store, two clothing stores, two drug stores.

LEE COUNTY.

FT. MADISON.—Canning factory, automobile factory, button factory, one dry goods store.

LINN COUNTY.

MARION.—Cigar factory, steam laundry, one hotel.

LOUISA COUNTY.

COLUMBUS JUNCTION.—Button factory, three retail stores.

WAPELLO.—Two retail stores.

LUCAS COUNTY.

CHARITON.—One department store, one drug store, one grocery store.

MADISON COUNTY.

EAST PERU.—Rock and stone manufacturing company, furniture store, restaurant, blacksmith shop.

WINTERSSET.—Cigar factory, roller mill company, one dry goods store, one savings bank, one millinery store, one meat market, one harness shop.

MAHASKA COUNTY.

NEW SHARON.—One laundry.

OSKALOOSA.—Blank book company, saddlery company, light, heat and traction company, one fruit store, one shoe store, two clothing stores.

MARION COUNTY.

BUSSEY.—One general store, one hardware store.

PELLA.—One tank factory, one carriage factory, one bank and office fixture factory, one hardware store, one novelty store, one restaurant, one telephone exchange, one cigar factory and retail store, one saloon, one dentist, one bank, one dry goods store.

MARSHALL COUNTY.

MARSHALLTOWN.—One pottery plant, one cereal food company, one galvanized cornice company, one wagon factory, one forge and iron frame factory, one cracker factory, one flexible steel mat company.

MILLS COUNTY.

GLENWOOD.—One retail grocery store.

MALVERN.—Cigar factory, flour mill, cold storage plant, one harness shop, one furniture store, one gent's furnishing store.

MITCHELL COUNTY.

OSAGE.—One wood working factory, one pickle factory, one rug factory, one iron works, one bakery, one bakery and restaurant, one dry goods store, one machine agency, one tailoring establishment.

MONONA COUNTY.

ONAWA.—One hardware store, one general merchandise, one millinery, store one candy kitchen.

MONROE COUNTY.

ALBIA.—One foundry, several new coal mines opened up.

MONTGOMERY COUNTY.

RED OAK.—One calendar manufacturing company, one canning company, one steel tank manufacturing company, one stock food factory, one shirt factory, one cigar factory, one national bank one dry goods store, one grocery store, one photograph gallery, one tea coffee and spice store, one buggy and bicycle store, one furniture store, one clothing store, one furnishing goods store.

O'BRIEN COUNTY.

SHELDON.—One medicine factory, one grocery store, one hardware store, one hotel, one saloon (wholesale and retail), one brickyard, two shoe stores, one clothing store, one plumbing shop, one boarding house, one cigar factory three restaurants, one dry goods store, one meat market, one millinery store, two fruit stores.

OSCEOLA COUNTY.

SIBLEY.—One creamery one tank factory, one savings bank.

PAGE COUNTY.

CLARINDA.—One poultry, butter and egg store, one printing company, one electric light company, one tile factory, one ice and fuel company, one laundry, one mutual telephone company, three coal mines, one cigar factory, one bottling works.

SHENANDOAH.—Three stock food factories, one wagon works, one gas company, two wholesale seed stores, one poultry packing house, one plating works, one milling company, one lumber yard, one shoe store, five other retail stores.

PLYMOUTH COUNTY.

AKRON.—One corn husker factory.

POCAHONTAS COUNTY.

FONDA.—One gent's furnishing company, one clothing store, one drug store, one implement store, one grain and implement dealer.

POLK COUNTY.

DES MOINES.—One beef and pork packing company, one automobile manufactory, one clay manufacturing company (hollow conduit), one garment factory, two skirt factories, one carriage factory, one mineral paint company, one cleaning soap factory, one casket factory, one saddlery factory, one vinegar and pickle factory, one washing machine factory, one gas engine factory, one wagon works, one wholesale bakery, one wholesale glass and paint company, one wholesale hardware and iron company.

POTTAWATTAMIE COUNTY.

AVOCA.—One instrument case manufacturing company, one lumber company.

SAC COUNTY.

ODEBOLT.—Six retail stores.

SCOTT COUNTY.

DAVENPORT.—One paper-box factory, one button factory, one carriage factory, one lithographing company, one oat meal mill, one wire fence factory, two washing machine factories, one butter tub factory, one cracker factory.

ELDRIDGE.—One cigar factory.

SHELBY COUNTY.

HARLAN.—One loom and rug factory, one gas engine factory, one steam laundry, two telephone companies, two brickyards enlarged and output doubled, one cigar factory, one wagon and carriage respository, two shoe stores two general stores, one drug store, one livery barn.

SIOUX COUNTY.

HAWARDEN.—Brickyard, medicine company, machine shop, cigar factory, three retail merchandise stores, one laundry.

STORY COUNTY.

AMES.—One retail novelty store.

NEVADA.—One savings bank.

STORY CITY.—One drug store, one grocery store, one harness shop, one jewelry store, one millinery store.

SAC COUNTY.

SAC CITY.—One grain conveyor factory.

TAMA COUNTY.

GLADSBROOK.—One state bank, one general merchandise store, one fancy grocery.

TOLEDO.—One flour mill, one meat market, one millinery store one harness shop, two hotels.

TRAER.—Brick and tile factory, ten retail stores.

TAYLOR COUNTY.

BEDFORD.—One retail clothing store, one grocery store, one jewelry store.

VAN BUREN COUNTY.

FARMINGTON.—Flour mill, cigar factory, foundry and repair shop, feed mill.

WAPELLO COUNTY.

OTTUMWA.—One ice company, one hay tools and swing factory, one rug factory, one specialty manufacturing company, one box car loader factory, one carpenter's square factory, one novelty manufacturing company, one stove repairs factory, two dry goods stores, one book store, one clothing store, one jewelry store, one feed store, one fuel company, one drug store, one oil supply company, one packing company's branch office, one brewer's branch office.

WARREN COUNTY.

INDIANOLA.—One hardware and implement store.

WASHINGTON COUNTY.

BRIGHTON.—One general merchandise company, one harness shop, one lumber yard, one meat market, one photograph gallery.

WASHINGTON.—One glove and mitten factory, one furniture factory, one pump factory, one scoop board and wagon box factory, one gas machine factory, two drug stores, two grocery stores, one furniture store, one restaurant.

WAYNE COUNTY.

ALLERTON.—One plow factory, one dry goods store, one harness shop.

SEYMOUR.—One new coal mine, one cheese factory, one state bank, one dry goods store, two restaurants, one blacksmith shop, one drug store, one nursery, one telephone company, one wood working shop, one real estate firm.

WEBSTER COUNTY.

FORT DODGE.—Two stucco plants, one oat meal mill, one brick plant, one mattress factory, one cracker factory, one overalls factory.

WINNEBAGO COUNTY.

FOREST CITY.—Canning factory, greenhouse, one factory manufacturing cement block for sidewalks, two cigar factories, one newspaper, one hotel.

WINNESHIEK COUNTY.

CALMAR.—One general merchandise store.

WOODBURY COUNTY.

OTO.—Two retail stores.

SIoux CITY.—One self feeder manufactory, one cement brick company, one boiler and sheet iron works, one immense meat packing plant, one wholesale furnishing and notion house, one wholesale carriage house, one wholesale paper and woodenware house and two wholesale cigar and tobacco houses opened.

WRIGHT COUNTY.

CLARION.—One cigar factory, one butter and egg store one steam laundry, one savings bank, bowling alley, hardware store, one racket store, one produce commission house, one restaurant and lunch room, two new churches, one railroad roundhouse shop, etc.

EAGLE GROVE.—One drug store, two tailor shops, one clothing store.

NEW INDUSTRIES—PART II.

Number and kind of new industries, manufacturing and mercantile, desired in each locality, together with the natural or acquired advantages and inducements offered.

ADAIR COUNTY.

ADAIR.—Desires a canning factory or any other labor-employing factory.

GREENFIELD.—Desires a canning factory and has the finest agricultural country in the world.

ALLAMAKEE COUNTY.

LANSING.—Desires a canning factory. More button blank cutting and finishing factories.

APPANOOSE COUNTY.

CENTERVILLE.—Desires a creamery, candy factory, canning factory, wagon and carriage factory, bindery, pickle factory, wholesale grocery and wholesale hardware.

This would be an ideal location for the special reason that we have an unlimited supply of cheap coal, plenty of good water, good farming country, the most important coal field in the state; have four railroads, electric street car line, electric light and gas, also public heating plant, a large number of miners and other laborers who are heavy consumers—two thousand miners alone. Citizens would be willing to give fair bonus and municipal corporation would rebate taxes for a term of years; there is, however, no standing offer.

CINCINNATI.—A good brick plant is especially needed and will pay from the start. There is an unlimited supply of coal at our door, also plenty of good water and wood.

MOULTON.—We need a canning factory, pickle factory, an implement factory, a foundry and machine shop, a candy factory, a furniture factory, a tool handle factory, a buggy factory, a tile and terra cotta factory, artificial ice plant and wholesale as well as more retail houses. This is an excellent distributing point, strong competition in freight rates. Investigate our advantages. This is a growing little city of 1,800 people; it has a rich agricultural country surrounding it and within a radius of fifteen miles has no competing market worth mentioning; is a division point on both the Burlington and Wabash systems and the terminus of one branch of the Wabash. There is no municipal debt. We are less than four hours' travel

from Des Moines. Some of the best retail rooms of the state are located here. Cannot guarantee any financial inducements, either public or private but can safely say that our citizens will subscribe liberally to light and water plant and aid by their patronage and influence any legitimate business.

MYSTIC.—We want a brick and tile yard; a good plant to consume our milk, either a creamery, cheese factory or condensed milk plant; a foundry is especially needed. We are on the main line of the Chicago, Milwaukee and St. Paul Railway, from Chicago to Kansas City. Vast quantities of good coal cheap, good rock, the best of clay for brick or tile, a good farming country, six miles from county seat, population 3,000; four churches, three good schools and two opera houses. We have a business men's organization here and while we have no definite plans now the right men will receive a cordial welcome and respectful consideration. Correspondence solicited.

BENTON COUNTY.

VINTON.—Would like a brick and tile factory and any other labor-emplying factory adapted to Iowa. We have good water and good railway facilities; we now have two large canning factories and a pearl button factory that employ over two hundred men throughout the year. Correspond with business men's association for inducements.

BOONE COUNTY.

BOONE.—Desire a creamery, cold storage and artificial ice plant and a pottery in the place of one burned out. We have extensive coal mines of good quality—cheap, large deposits of clay of many varieties suitable for pottery, pressed and paving brick. No bonus is held out but exemption from municipal taxes and encouragement in all legitimate ways is offered. Correspond with Boone Business Men's Association.

BREMER COUNTY.

WAVERLY.—We want and will assist a packing house, oat meal mill, sorghum factory and a wholesale grocery, and any other industry will receive due consideration. This is the county seat of Bremer county, population 3,400, situated on the Cedar river with fine water power and has a complete system of electric light, sewer and waterworks, supplied from a large flowing well 1,700 feet deep flowing 300 gallons of pure water per minute. Among its busy industries at present are a milk condensing factory with an output of three car loads of condensed milk per week, the only one of its kind west of the Mississippi river; a canning factory, the second largest in the state with a capacity of 2,500,000 cans per season; a creamery supply and a butter tub factory.

BUCHANAN COUNTY.

INDEPENDENCE.—We have a business men's club which stands ready to encourage any enterprise in the line of manufactures and would be able

to secure from our citizens inducements commensurate with any proposed undertaking.

BUENA VISTA COUNTY.

MARATHON.—Requires a brick and tile plant, a tank and butter tub factory; splendid shipping facilities on three railroads. Plants established here can have municipal taxes refunded.

SIoux RAPIDS.—Need a good electric light plant and will give substantial aid to any industry that will be of benefit to town; anxious for a canning factory. Sioux Rapids Business Men's Association anxious to correspond with any enterprise looking for location with good railroad facilities and inducements they have to offer.

BUTLER COUNTY.

PARKERSBURG.—We have good shipping facilities on two good lines of railroad. We have clay for brick making.

CALHOUN COUNTY.

LOHREVILLE.—We desire a beet sugar factory, straw paper mill and brickyard. A first-class dry goods store would do well here, also a good tailor, and other manufacturing plants that would be adapted to an agricultural locality. We have three good railroads, plenty of good water, good natural drainage and one of the best producing agricultural localities in the world, excellent clay for either brick or tile. Our several railroads give us close connection with all the great coal fields of Iowa and direct shipping to Chicago, Omaha, Sioux City, Milwaukee, St. Paul, Minneapolis, Duluth, Des Moines and St. Louis. We offer the advantage of a good locality and undivided support in helping to develop the country and locality.

MANSON.—We desire any kind of factory for inland town. We have an unlimited supply of soft water, two railroads, and are in close proximity to the coal fields of Iowa. We offer exemption from taxes and location for most any kind of factory.

ROCKWELL CITY.—We desire a foundry, machine shop, supply house and any manufacturing industry suitable to this locality. Have good railroad facilities that are now reaching out in five different directions; two more lines practically assured which will increase our supply of cheap coal. Our Business Men's Association offers inducements to the right parties, but these cannot be definitely stated until the character of the industry is known.

CARROLL COUNTY.

COON RAPIDS.—Desire a canning factory. We have good water and a fine water power.

CASS COUNTY.

ATLANTIC.—Would welcome the following industries cereal mill—especially oatmeal mill; brick manufactory, foundry and cob pipe factory. We are in the center of the corn belt of Iowa—good railroad facilities and

have good electric power. Our people are enterprising and ready to offer reasonable inducements if cost of establishment exceeds \$5,000. Will exempt from city taxes for five years.

CEDAR COUNTY.

WEST BRANCH.—Would like a canning factory and a feed grinding mill. This is a locality of small farms and thickly settled and could support the above plants well.

CERRO GORDO COUNTY.

CLEAR LAKE.—We need manufacturing industries to employ labor. We have an abundance of soft water, good railroad facilities. We are situated on Clear Lake one of the finest lakes in Iowa, a natural summer resort and a healthy, delightful place in which to live.

MASON CITY.—This city has room for manufacturing plants of all kinds that will employ labor, is a good railroad center, contains most all modern improvements, has a fine trade from surrounding country and small villages near, fine street car service and no saloons.

CHEROKEE COUNTY.

CHEROKEE.—Desires a canning factory and a wholesale grocery. We are in the center of a large unsupplied agricultural region.

CHICKASAW COUNTY.

NASHUA.—Desires a cooperage and barrel factory, woodenware factory and a canning factory. We have excellent water power, plenty of room, low rents, good soil for raising pickles, cabbages or small stuff; good railroad facilities. We have a good one and two-story frame building with gravel roof formerly used for a pickle factory and sufficient ground that the citizens will turn over to any responsible person or firm if they will agree to run it continuously for five years.

NEW HAMPTON.—We are strong in dairy products and a cheese factory or a condensed milk factory would have splendid advantages here. We raise plenty of sweet corn and vegetables of fine quality and a canning factory would do well here. We have two railroads, freight rates are fair, and shipment easy. It is impossible to state just what inducements would be made, propositions are considered separately.

CLAY COUNTY.

SPENCER.—Desires a condensed milk factory, canning factory, broom factory, brick and tile factory and any other industry that will employ labor. We have four railroads, good schools, churches, banks, etc., and fine agricultural territory surrounding this city. No saloons. Only forty minutes' ride to the finest summer resort in the West. We pay bonuses, also exempt from taxation for a certain number of years.

An exhibit of interest to Clay county:

SPENCER, IOWA, April 14th, 1903.

Bureau of Labor Statistics, Des Moines:

GENTLEMEN.—Our works here is only an experiment. We are simply breaking the flax straw for our mills in the east (the Stevens Manufacturing Company of Fall River, Mass.). This company is trying to re-establish the linen industry and if we can get flax fiber as cheaply by raising it, as we can buy it in Canada and Europe, the company will continue to raise flax for fiber, and this ought and will show the farmers how they can get a better yield as they can save both seed and straw.

It will be one year before we will know whether this enterprise will pay or not as we have manufactured none of our own production as yet.

If the experiment proves a success we will put in other plants around the state this fall.

Yours respectfully,

OWEN SHEEHAN,

General Manager Spencer Flax Mills.

CLAYTON COUNTY

ELKADER.—We desire a canning factory, oatmeal mill and other labor-emplying industries. Center of wealthy farming community, plenty of local capital, first-class waterworks system, electric light and good water power. Our Business Men's Club would furnish information to prospective investors.

GUTTENBERG.—Desires a good retail dry goods house. Have given bonuses to manufacturers.

CLINTON COUNTY.

CLINTON.—Desire a farm implement factory, collar and cuff factory, buggy factory and car factory. We have best river and railroad shipping facilities of any town in the West, natural building location, large territory for farm implements. Seven trunk line railroads leading to Clinton; Mississippi river, seven miles frontage of deep water. Well equipped fire department, excellent school system. Will donate building, ground and stand expense of moving plants to this city; further inducement by way of subscription for stock by individual business men. Clinton Commercial Club live and active.

CRAWFORD COUNTY.

DENISON.—We want a grocery jobbing house, canning factory, hotel, additional retail grocery—but three here in town of 3,500. Additional dry goods store and a brewery needed. We have two main lines and one branch line of railroad, affording a good jobbing territory; splendid farming country; rich farmers with lots of money to buy what they want. Business men would extend good financial aid to any plant having some capital of its own that mean business. A hotel project would receive good support.

DAVIS COUNTY.

BLOOMFIELD.—Desires a tile factory or anything of that kind to utilize fire clay, of which we have an unlimited amount. We have an abundance of soft coal in this county of good quality.

DECATUR COUNTY.

LAMONI.—We need a canning factory, electric light plant, foundry and machine shop, cigar factory and broom factory. We have good soil for raising vegetables of all kinds; also good apple and small fruit country. There is no foundry nearer than forty miles. There is an urgent demand for electric light plant to be conducted with individual capital. We are offering no specific inducement but would all be glad to give assistance to any legitimate enterprise that could be successfully conducted.

LEON.—We need a flour mill, also a grain elevator. We have a fine opening for the above-named plants. There are but two elevators in the county. We are surrounded by a fine agricultural country and there could be shipped large quantities of corn, hay, oats and timothy seed. Considerable fall wheat is raised and the apple crop is large and yearly increasing. We have good railroad facilities.

VAN WERT.—Desires a brick and tile plant, creamery, meat market, canning factory, and any legitimate business—either mercantile or manufacturing. We have the best of railroad facilities, cheap fuel, rich farming country, thirteen miles to nearest town of any importance. We will give moral and financial support to any legitimate enterprise; will give site and remit taxes for five years to manufacturers; willing to do all in our power to aid new industries.

DELAWARE COUNTY.

EARLVILLE.—We need an electric light plant, waterworks system and a canning factory.

DES MOINES COUNTY.

BURLINGTON.—The number of manufacturers desired here is unlimited. We want all kinds; there is an unusually good opening for brick and excelsior plants and wholesale and manufacture of wearing apparel, also a tile plant. We have low transportation rates by river, fine distributing point by rail in all directions. The city has all modern improvements. We offer all new manufacturing industries exemption from taxation for a period of five years.

DICKINSON COUNTY.

SPIRIT LAKE.—Desires canning factory for which we have every advantage. We will donate location or furnish a part of capital required.

DUBUQUE COUNTY.

DUBUQUE.—We desire and have room for any and all kinds of manufacturing and mercantile enterprises. We are well located for freight

rates—either by river or rail; a large per cent of our working people own their own homes; healthy climate, fairly low taxation, low rents and plenty of room. For any desirable manufacturing enterprise city taxes can be remitted for a few years and other assistance rendered. There is no cash bonus offered.

EPWORTH.—We desire manufactures and all employing plants. We have a very healthful locality, moral town and good railroad facilities. We have a fine new factory built of brick that would be given to some manufacturing enterprise.

EMMET COUNTY.

ESTHERVILLE.—Among the industries that would find a profitable field here is a tow mill (thousands of acres of flax are raised in this vicinity each year, and the straw goes to waste), a binder twine factory, a planing mill, a carriage and wagon factory, a canning factory, fence works, a saddle and harness factory, a foundry and machine shop—excellent opening for a cereal or oatmeal mill, an overalls factory, a garment factory, a wholesale fruit house, a wholesale drug store, and a cold storage. We want other establishments also; there is a rich field for them. There are four local banks with strong capital, and they are disposed to pursue a liberal policy with manufacturers and jobbers. No line of business is overdone and if you wish to locate where business is good and all classes of property a good investment, a card of inquiry will be cheerfully answered. Correspondence is cordially invited concerning anything in the line of manufacturing or jobbing business. Address Secretary Commercial Club. Few locations in any county have the natural advantages that we possess as a manufacturing and jobbing center. There is more than \$25,000 per month paid to employees living in this city; the building improvements in one year amounted to \$297,000 in round numbers; eighty new residences and several new business blocks were erected last year. This year there will be more than 100 new residences and a number of new business blocks built. Another proof of our growth is found in the fact that our postal receipts for the last fiscal year passed the \$10,000 mark, insuring free delivery in a short time. The citizens of Estherville are on the alert for new enterprises and every facility and inducement consistent with good business practice will be extended.

FAYETTE COUNTY.

CLERMONT.—We need a canning factory, also wagon shop and newspaper office. We have good water power, and have building material bountiful and cheap. We raise excellent corn, tomatoes and other vegetables here. We have a factory building, at present unoccupied, and the people will be glad to help any manufacturing enterprise.

OLWEIN.—We need a broom factory, furniture factory, sash door factory, planing mill, candy factory, canning factory and a manufacturing concern to use castings from a foundry now building. We have unusually good shipping facilities on two railroads. There are not enough factories here to employ our young people who desire employment. We offer exemption from taxation and free sites for buildings.

FLOYD COUNTY.

CHARLES CITY.—We need a brick and tile plant and other manufactories that will employ labor. We have good shipping facilities on two railroads. Write for inducements to Commercial Club.

ROCKFORD.—We have two good water powers for factories; have clay for paving and building brick, also plenty of stone. We need a canning factory.

FREMONT COUNTY.

HAMBURG.—Desires a shoe factory, a cooperage, vinegar works, fruit basket factory, a cold storage plant for dressed poultry and fruit, a carriage and wagon factory, a tile and vitrified brick plant, and a first-class dry goods store. We have good railroad facilities plenty of coal and wood for fuel, cheap; plenty of water, fruit and grain; the best land on earth surrounds this place. Our citizens will aid any worthy enterprise.

GRUNDY COUNTY.

GRUNDY CENTER.—We need a brick and tile works, cheese factory, and a canning factory. We are in the center of a rich agricultural district. No special inducements offered at present.

GUTHRIE COUNTY.

GUTHRIE CENTER.—There is a good opening here for an electric light plant. We have no manufactories here now and there is no doubt but what they could be established on a paying basis. We have never offered any inducements so far.

HAMILTON COUNTY.

WEBSTER CITY.—We desire and will assist in the establishment of any kind of manufacturing industry that will give employment to labor. We have coal near at hand, excellent railroad facilities and good water supply. We offer free water and light and remission of taxes for a number of years.

HANCOCK COUNTY.

BRITT.—We need canning factory, foundry and oatmeal mill. Opera house needed badly. We have a feasible proposition in sight for an electric railroad line that will be made known on application. We have an excellent agricultural district, lands capable of high cultivation and adapted to all kinds of vegetables for canning. We have paid a bonus for all we have acquired thus far by public subscription. Business Men's Association will entertain any reasonable proposition.

HARDIN COUNTY.

ALDEN.—A canning factory is especially desired and any manufactory that will employ labor. We have a fine farming community, a good water power on the Iowa river and two good railroads. Without doubt our peo-

ple would give the right parties financial aid to start out and remit taxes for a period of years.

HUBBARD.—We need a flour mill and a good bank. We have a fine farming country and plenty of wealth.

IOWA FALLS.—We need manufactories to utilize our splendid clay deposits which are among the best in the state; also canning factory and any other that will employ labor. We have fine water power—an abundance of stone for building purposes, plenty of water, four railroads which insures easy shipping facilities and good rates. Our citizens are willing to help in the way of donations anything they believe to be legitimate and stable.

RADCLIFFE.—We desire a brick and tile factory, canning factory, creamery. We have good railroads, fertile soil and rich community. We offer liberal cash and land bonuses.

HARRISON COUNTY.

MISSOURI VALLEY.— We need manufactories of any kind and any number of them. We have first-class outlet by rail in any direction. We would be willing to offer inducements to reliable concerns—depending somewhat upon conditions.

HOWARD COUNTY.

CRESCO.—We need a canning factory and a brickyard, a binder twine factory, to utilize our flax tow. We have a very fertile soil and clay for white brick. We desire an interurban electric railroad and believe it would be a paying investment.

IOWA COUNTY.

WILLIAMSBURG.—Need a canning factory. We have a very productive farming community.

JACKSON COUNTY.

MAQUOKETA.—We want all the manufactories and mercantile enterprises we can get.

JASPER COUNTY.

COLFAX.—Desire any manufacturing enterprise that will employ labor remuneratively. We have low-priced fuel; abundance of water and cheap real estate. We desire an opera house—there is none here now. We offer no specific inducement now, but are willing to assist almost anything that will build up our town. We will help an opera house.

NEWTON.—We desire any kind of manufactories. We have good transportation facilities. Cheap and abundant fuel supply, low taxes and good, cheap labor. This is the best town in the state for its size. All inducements in reason, will be given exemption from taxation for a term of years.

JEFFERSON COUNTY.

FAIRFIELD.—We want a malleable iron factory, an overalls factory and a foundry. We have an abundance of soft water for boiler use, are located at the crossing of two of the great trunk lines of the state. Our city of 5,000 is going rapidly forward. We will pay a reasonable cash bonus or give land for location.

JOHNSON COUNTY.

IOWA CITY.—Iowa City wants a paper box factory, a carriage and wagon factory, a factory to manufacture farm machinery of all kinds, a canning factory, an oatmeal mill, a factory to manufacture cereal foods of all kinds, a shoe factory, a piano and organ factory, a furniture factory, a cellulose factory, a basket factory, a hosiery factory. All of the above are sure to succeed, and Iowa City can furnish labor of a high grade. No strikes or labor disputes. Rents and provisions are cheap. Every one feels at home here, where associations and surroundings are pleasant and of the highest moral character. Parties seeking locations or employment will receive prompt and accurate information about Iowa City, Iowa, by addressing the Iowa City Commercial Club, Iowa City, Iowa.

JONES COUNTY.

ANAMOSA.—We are anxious for any kind of manufactories. We have a fine water-power. We offer ground and small bonus.

MONTICELLO.—We want a shoe factory, a whip factory, a carriage factory, a shirt and overalls factory, a knife factory, button factory, watch factory, glove factory, collar factory; and there are many others we might mention that could prosper here. We have good water power and fine railroad facilities for shipping; have a good farming locality and prosperous farmers. We have the wealthiest town in the United States for its size—nearly \$2,000,000 on deposit in two banks with a population of 2,500* The city would exempt from taxation and would furnish free water; would offer free location to the right parties who are hustlers. We want factories and will meet parties on any liberal legitimate proposition.

KEOKUK COUNTY.

HEDRICK.—We need a canning factory; also a good laundry, meat market, cigar factory, furniture store. We have a rich farming community, good soil and plenty of people to raise stuff, good consuming population and three railroads on which to distribute. A good laundry would prosper here and be liberally patronized.

WHAT CHIEF.—We need a pottery, fire brickyard, and any other plant to utilize our splendid clay deposits. We have plenty of soft coal, a good farming community, and from the satisfactory tests that have been made are sure of the value and character of our clay.

* This is a per capita of \$300.

KOSSUTH COUNTY.

ALGONA.—We want a tile factory, canning factory, machine shop, oatmeal and cereal plants. We have a good water power idle (mill burned down). Three railroads, insuring easy shipping facilities and fair rates. We offer ground for a plant, a bonus, and citizens will take an interest in plant.

LEE COUNTY.

FR. MADISON.—We desire a furniture factory, wagon and carriage factory, brick manufactories, wholesale grocery. We have 200 miles of exclusive territory and \$300,000 local business annually, excellent transportation facilities into good territory, freedom from labor troubles, cheap living, healthful location, population largely German with large families of willing workers. Our people will take stock interest in legitimate mercantile or manufacturing concern. Can provide good building site with trackage. Low taxation.

KEOKUK.—We want all kinds of manufactories in addition to those we now have. We have splendid natural advantages of power, both water and electric, and in addition to that we have unequalled facilities of transportation both by rail and river. This is a natural distributing point and bids fair to become the manufacturing center of the United States. We are in easy reach of an inexhaustible coal supply and the development of the natural power possibilities places this locality easily in the lead of any other in the West. Our citizens and municipality have heretofore demonstrated their liberality and willingness to assist and foster any legitimate industry and can be depended on to do so in the future.

LINN COUNTY.

CEDAR RAPIDS.—We have numerous manufacturing industries that are prospering and we desire others of all kinds. No manufacturing business is overdone here and there is still room and advantages unoccupied. We have water and electric power, all the advantages of a modern city. The very best of railroad facilities and good rates. Our business men will consider legitimate propositions that will build up our industries.

LISBON.—We want a canning factory. We have an excellent farming country and such a factory could be supplied with fruit and vegetables in any amount.

MARION.—Canning factory needed. We have a city of nearly 5,000 without any manufactories. Good schools, plenty of money; willing to aid any industry. Both corporation and citizens will aid.

LOUISA COUNTY.

COLUMBUS JUNCTION.—Would like paper box factory, canning factory; we are located at the junction of the Cedar and Iowa rivers; village of 1,200 inhabitants, splendid railroad facilities, good farming community, soil particularly adapted to the cultivation of garden produce. The city has

not offered any inducements but would be glad to do so to the right kind of a manufacturing institution. They would offer a cash bonus but would rather furnish a building site.

WAPELLO.—We want all kinds of factories—a canning factory pickle factory, etc. We have plenty of good water and fuel, soil specially adapted for truck gardening.

MADISON COUNTY.

EAST PERU.—We want a brick and tile plant and a canning factory. Rock quarries here to be opened up. We have the best of brick clay, fine and accessible ledges of rock. Enormous crops of vegetables for canning purposes. Citizens will co-operate in establishing a canning factory.

WINTERSET.—We need a waterworks system and a canning factory. This county lies in the heaviest part of the corn belt of the world. There is limestone in abundance of the very best quality in the state. Waterworks could be put in here—think city would grant a franchise to a responsible company for a term of years.

MAHASKA COUNTY.

OSKALOOSA.—We need a plant for the manufacture of coal mining machinery, a knitting factory, an agricultural implement factory and a brick and tile factory and pottery. We have an abundance of cheap coal, good railroad facilities and the best of clay. Our city government is liberal in their views and would offer inducements in the way of reduction of taxes, etc. We have a commercial club.

MARION COUNTY.

BUSSEY.—We need a brick and tile plant. We have the finest kind of shale for paving and building brick. We invite the inspection of brickmen; we have the largest vein of soft coal in the state ranging from eight to eleven feet in thickness within a few miles of town, assuring cheap coal and consequent cheap power.

PELLA.—We want cereal mills, factory to make workingmen's clothing, an electric light plant, limekiln, capital to open up stone quarries. We have an abundance of coal, water, lime and wood. We offer exemption from taxes for a period to responsible parties.

MARSHALL COUNTY.

MARSHALLTOWN.—We need brick and tile works, condensed milk factory, creameries, cheese factory, glove and mitten factory, overalls factory and any other labor-employing concern. We have the very best of railroad facilities for shipping. This is no doubt one of the best distributing points in the state; excellent agricultural territory. We have fine clay within reasonable distance, fine dairy products. We offer free taxes, free water, sites and sometimes a cash bonus, depending in each case upon the character of the industry.

MILLS COUNTY.

GLENWOOD.—We need manufactories of all kinds, especially a canning and preserving plant, an overalls and skirt factory, glove and mitten factory, condensed milk factory. We also need a large general store and a flour mill. We have good double track railroad facilities. We can offer cheap homes to laborers. We produce large quantities of fruit, particularly apples of which there is a large annual waste that might be utilized by a canning and preserving plant. We have rough land suitable for sheep farming and orchards at very moderate prices. It is believed that coal in paying quantities could be found here. A gas plant might be operated here with profit.

MALVERN.—We want a starch factory, a foundry, canning factory, preserve and pickle works, poultry packing plant and branch packing house. We have good shipping facilities on main line of three railways, are in the center of the greatest corn and fruit region of Iowa. Any offer of encouragement would be based on the character of the industry proposed; we are willing to do the liberal thing when parties mean business.

MITCHELL COUNTY.

OSAGE.—We need a brick and tile plant, creamery, canning factory, foundry, flour mill, overalls factory, farm implement factory. We have two railroads, good building stone, good brick clay, good stone for lime, an undeveloped water power on Cedar river two miles from city, fine farming community; no saloons in this county for years past, never any trouble with labor. Any offer of assistance would depend upon the industry, the amount of capital to be invested and the number of persons employed; can secure sites along railroad for right parties free, and probably in some instances other substantial assistance.

MONONA COUNTY.

ONAWA.—We need a flour mill, and any other manufactory. We have excellent railroad facilities and the co-operation of citizens may be relied upon.

MONROE COUNTY.

ALBIA.—We desire a brick and tile factory, a cold storage plant, canning factory, wholesale grocery. We are in the center of coal mining industry and have superior railroad facilities; good agricultural country. We have no standing offer of inducement, but would be willing to do the right thing.

MONTGOMERY COUNTY.

RED OAK.—We need manufactories of any kind that will employ labor and build up our city. We have a fine power plant for the transmission of power by electricity and any establishments requiring not more than fifty-horse power could avoid the expense of a power plant by renting power at a very reasonable rate. We have good railroad facilities on main line with branches extending in every direction as feeders and dis-

tributors. This is not a wealthy community and inducements usually take the form of a subscription to stock. A bona fide good thing might get a bonus.

O'BRIEN COUNTY.

SHELDON.—We desire iron and wood working factories, machine shops, farm implement factory and distributing depot and any good wholesale business. We have three railroads communicating with a very large unsupplied territory. We have a modern city of 3,400 people, a fine electric light and waterworks system, a wealthy farming community. We offer nothing specific but are of the opinion that a permanent concern of any value would receive all needed support.

OSCEOLA COUNTY.

SIBLEY.—We have room for any manufactories that are adapted to this locality and would welcome same. We have three good railroads, that afford easy shipping facilities and low rates, fine farming land and a good market for farm products. There has never been any organized effort to offer any inducements to factories. Can't say what might be done.

PAGE COUNTY.

CLARINDA.—We need a paving brick plant, canning factory, electric street railway, cereal mill, wholesale grocery and any other manufacturing or mercantile enterprise. We have fine electric power for any kind of manufacture, the finest of clay for paving brick, plenty of good coal cheap, plenty of water. To concerns of merit we will furnish free sites and exempt from taxes for five years. If an especially good and large concern we will remit taxes for ten years.

SHENANDOAH.—We desire an oatmeal mill, shoe factory, vitrified brick works, implement factory, paper mills, pickle and vinegar factory, basket factory, furniture factory, wholesale grocery, drugs and harness stores needed. We have splendid railroad facilities on three railroads, have good sewerage; water, gas and electric light plants, two telephones, excellent schools, two colleges, biggest nursery and seed shipping point west of Chicago, strong banks and no unions. We offer liberal bonuses, free sites, free city tax, and probably free water for a term of years; also furnish free side track facilities. This is by far the most progressive town in western Iowa.

PLYMOUTH COUNTY.

AKRON.—We need a brick and tile plant, an electric light and gas plant and a canning factory. We have fine clay for brick, large territory tributary to this town. Presume stock in such plants could be sold here; small bonus might be given.

POCAHONTAS COUNTY.

FONDA.—We need a flour mill. We have a large territory to draw upon two good railroads. We offer good bonus, water, site, taxes.

LAURENS.—We need an electric or gas lighting plant and a tailor shop and any manufacturing establishments. This is purely a farming community. We would raise bonuses for manufacturers by subscription.

POLK COUNTY.

DES MOINES.—Among the many industries needed may be mentioned starch works, oatmeal mill, factories to make farm machinery of all kinds, wagon and carriage factory, shoe factory, stove works, and a factory to build freight and passenger elevators, pipe organ and piano factory. There is an opening for a roller mill, malleable iron factory, pottery, etc. Des Moines is the commercial and educational, as well as political and geographical center of Iowa. Also emphatically a railroad center, a manufacturing center, an insurance center, a banking center, a jobbing center, a retail center, a convention center, a musical center, and an amusement center. Des Moines, the capital of Iowa, has now a population of fully 80,000. There is nothing especially exciting in its history. No booms, riots or conflagrations have marred its pages. It tells simply the story of a half century of persistent growth, is wide-awake, up-to-date, and an excellent type of a modern, conservatively built western city of the better class. It is the central city of great Iowa, and as long as Iowa is, Des Moines must be. Having this background of perpetuity, money invested in Des Moines—using ordinary prudence, only in selection—can never be lost or even jeopardized. Des Moines has its full complement of beautiful and appropriate buildings. First comes Iowa's four-million dollar magnificent capitol building. A new million dollar post-office will be erected at once on the river front site recently purchased by the Federal Government. Polk county's three-quarter million dollar court house is in process of construction. The city's new free public library, costing thus far nearly one-quarter million, is nearly completed. In this list might be included four hospitals, two children's homes, Home for the Aged, Y. M. C. A. building, and a dozen other well-housed propositions of a public character. Over 600 acres are devoted to park purposes. These beautiful and attractive resorts are easily reached over our elaborate street railway system. "Fort Des Moines Post" was established in 1900. It is to be equipped to house a full regiment of cavalry—1272 men and officers, with as many horses. Seventy-two buildings have been planned for the reservation and some of them are now under construction. The Iowa State Fair is permanently located in Des Moines. A stock pavilion and auditorium, costing \$50,000, has been erected on the grounds. With the advent of the Des Moines, Iowa Falls and Northern, we have eight trunk lines. These, with their branches, reach out in seventeen directions. The commercial importance of Des Moines will be better understood when the reader is informed that the in and out freight handled by these different roads last year aggregated nearly 132,000 car loads. The city's electric street railway system is operated over about seventy miles of steel track. Interurban lines recently inaugurated already connect Des Moines with many outlying towns. The city of Des Moines is served with pure water through upwards of 100 miles of mains. The system is modern and complete, affording ample pressure for fire protection. Our gas and electric

light plants are also modern and equipped to care for a large patronage. The light plant is able to furnish power at a minimum cost to many factories. Fully sixty-five miles of vitrified brick pavement has been laid during the last ten years. The high grade paving brick used in Des Moines is manufactured here. Our sewer system is elaborate, extensive and sanitary. As has already been intimated, Des Moines is emphatically the educational center of the state. Our free school system is perfect in all its details; requiring the use of forty-seven school houses. Our colleges, including Drake University and Highland Park College, each having an enrollment of over 1,500, are renowned. The Capital City Commercial College is the largest business school in the West. The S. S. Still College of Osteopathy has distanced all rivals Counting technical schools, these institutions number twelve in all. The college population of Des Moines exceeds 5,000. Des Moines has four fine opera houses, at the head of which is the great Auditorium, comfortably seating 3,000 people. Des Moines, being a convention city, is well equipped to care for many visitors. Twenty-eight hotels, large and small, with numerous boarding places, make it possible to accommodate a great crowd on short notice. Des Moines has long been known as the "Hartford of the West." The home offices of at least fifty-five insurance companies, including fire, life, fraternal, etc., are located here. It is estimated that five thousand people gain their living in this line of business. Fourteen banks, with deposits averaging \$16,000,000, makes Des Moines a money as well as an insurance center. Des Moines is very prominent in printing, publishing, binding, book-making, engraving, etc. Forty establishments, some of them employing as high as 100 people each. Des Moines is especially prominent on account of its coal, brick, tile and clay industries. The last census credits the city as being possessed of upwards of five hundred factories large and small. Fully two hundred of these are important enough to attract attention. An immense jobbing business is transacted in Des Moines. Every line is represented. The wholesale business transacted aggregates over sixty million per year, and is increasing rapidly. Des Moines enjoys an enormous retail trade. There are six large dry goods stores, and other lines are just as well represented. On an average, the city entertains fully eighty conventions yearly, for which a reduced railroad rate is made. This brings many buyers from outside towns. Our stores compare favorably with those in cities of double our population. The city will remit taxes for a period of years on important industries not yet represented here, determined by the number of persons they employ—say from five to ten years. A down town location with railroad switch at the back door can be secured for factories who will build, on very liberal terms, ten years' ground rent free except taxes on same, and these may be remitted as above; after ten years, four per cent ground rent on appraised valuation.

POTTAWATTAMIE COUNTY.

Avoca.—Need all kinds of manufactories to employ labor. We have good railroad facilities and an enterprising and energetic class of citizens who would give substantial encouragement to the right parties.

OAKLAND.—We need an electric light plant, creamery, canning factory. We offer no special inducement but think our citizens would help.

SAC COUNTY.

ODEBOLT.—We want an electric light plant, canning factory and heat plant. We offer any reasonable inducement.

SCOTT COUNTY.

DAVENPORT.—We desire a wagon factory, brass foundry, boat builder, cotton mill, linen mill, photo-engraving, water power plant, street car factory, fuel oil storage. We have good shipping facilities both by rail and Mississippi river; low taxes, good schools and churches, low funded debt, centrally located, good banks and plenty of laboring men and mechanics. We do not give bonuses, but to good manufacturing concerns we can furnish ground only.

ELDRIDGE.—We want a laundry and a bakery. We have a good farming community. No special inducements.

SHELBY COUNTY.

HARLAN.—We want a canning factory, a beet sugar factory, wholesale houses of all kinds. Any number of light manufactories desired. We have an abundance of raw material for canning and beet sugar factory. We have a commercial exchange that will entertain propositions and secure valuable co-operation.

SIOUX COUNTY.

HAWARDEN.—We need a canning factory, brewery, wholesale grocery. brick and tile plant, gypsum mills, wholesale grocery. We have a fine water power, good water and clay, good transportation facilities and fine agricultural region. We have good gypsum deposits. We offer cash bonuses and real estate.

STORY COUNTY.

AMES.—We need a butter tub factory, want a butter and egg house, also a cold storage plant. We have an abundance of cheap fuel, water and good railroad facilities. Our financial interests are limited but our business men will contribute; inducements, rebate of taxes.

SAC COUNTY.

SAC CITY.—We need a brick and tile factory, butter renovator, straw paper mill. We have a great demand for brick and tile and no good factory convenient, plenty of straw and water for a paper mill. We make no specific offer but citizens are ready to help any legitimate enterprise.

TAMA COUNTY.

GLADSBROOK.—We desire a canning factory. We have good farming country where plenty of tomatoes and corn for canning could be raised; two railroads. We will give ground and a liberal bonus and city water free.

TRAEER.—We want a flour mill, canning factory, foundry and machine shop. We have two railroads, insuring good shipping facilities and fair rates. We will co-operate and will give a small bonus for anything we need and we need nearly everything on the list.

TAYLOR COUNTY.

BEDFORD.—We want a canning plant, a flour mill and an implement factory with a foundry in connection. We have a rich farm land and good stock country, with good small fruit peaches and apples. The citizens would take stock or raise a bonus for any enterprise which would be of mutual benefit.

VAN BUREN COUNTY.

FARMINGTON.—We need small factories of all kinds. We are surrounded by a rich farming country with plenty of good coal and water, also an abundance of lime stone. Our citizens have heretofore done something in the way of offering inducements and no doubt would do so again.

KEOSAUQUA.—We need manufactories of all kinds and can offer natural advantages that are unsurpassed anywhere in the state. We have plenty of available stone of superior quality for building purposes, splendid natural drainage. The early development of the finest water power in the state is assured. We are surrounded by a fine agricultural territory and are in close proximity to the coal fields insuring cheap fuel.

WAPELLO COUNTY.

ELDON.—We want a pressed brick plant and any other plant to utilize our clay which is of the very best quality. We need a cement plant to use up our stone of which we have an unlimited supply. We have plenty of undeveloped coal land. We want a pearl button factory, a canning and pickle factory. Good inducements to responsible parties that mean business.

OTTUMWA.—We need an oatmeal cereal plant, paper mill, morning daily newspaper, a first-class hotel, factory for hardware specialties, tile factory, brewery, wholesale clothing, wholesale boot and shoe houses needed. We have splendid railroad facilities, having four trunk lines here; abundance of cheap fuel, steam coal costing only 70 cents per ton in the city. Des Moines river furnishes excellent water power and artesian wells give a never-failing supply of pure water. We donate sites to manufacturers and have in the past offered other inducements.

WARREN COUNTY.

INDIANOLA.—We desire manufactories of any kind. This is a college town and is improving rapidly. We are in the midst of a fine farming community and there is no good reason why certain manufacturers could not do well here. If they come we will try and help them.

WASHINGTON COUNTY.

BRIGHTON.—We want a flour mill and our splendid quarries developed. We have a good water power on Skunk river.

WASHINGTON.—We want a wagon factory, an implement factory, a starch factory, an oatmeal mill and canning factory. We have fine agricultural country, good railroad facilities in all directions, abundant water supply, cheap fuel and low taxes. We donate sites and cash inducement to right party.

WAYNE COUNTY.

ALLERTON.—We need dry goods store and harness shop.

SEYMOUR.—We need a hay stacker and rake factory, canning factory. We have cheap coal, good shipping facilities, junction point of two main lines of railroad; splendid farming country surrounding. Good inducements to the right parties.

WEBSTER COUNTY.

FORT DODGE.—We want a foundry and machine shop, a first class hotel, a sewer plant and canning factory. The largest gypsum deposit so far discovered is located here. We have good coal, fine glass sand, fine pottery clay and fine clay for pressed brick. Our citizens are liberal and will give to any good manufacturing concern that will locate here.

WINNEBAGO COUNTY.

FOREST CITY.—We desire a brick and tile factory, machine shop and foundry. We want a business college. We have clay for brick, no factory within thirty miles, two railroads, low cost of living, healthful location. We offer ten per cent bonus, twenty per cent in stock.

WINNESHIEK COUNTY.

CALMAR.—We need brickyard, flour mill, dry goods and ready made clothing store, butcher shop, four divisions of one railway center here, giving best of shipping facilities. The city offers no inducement but citizens would likely help a brickyard or flour mill.

WOODBURY COUNTY.

SIoux CITY.—Sioux City requires additional wholesale dry goods, boots and shoes and hats and caps wholesale houses. The main industry of this place is meat packing but still there is room for expansion. It is an ideal locality for such lines of business. Sioux City has always shown a liberal spirit to prospective investors and is disposed to follow this program in future to concerns that will locate and use the economic advantages furnished. A tannery, boot and shoe factory would find this point an advantageous location to use the by-products of the packing houses which are now transferred to the East to be manufactured and brought back again to the West for consumption. Sioux City possesses superior

advantages as a distributive point and should not be overlooked by people seeking a profitable location to establish a substantial and lucrative business.

WRIGHT COUNTY.

CLARION.—We want a canning factory and a brick and tile plant. This would be a splendid location for small industries of every kind, being well located on two strong main line railways and a division point for one of them, excellent land lying in close proximity to coal fields, abundant supply of water, close communication with East and North markets, an energetic class of citizens mostly native born. Our business men's association will correspond with and aid any meritorious worthy proposition.

EAGLE GROVE.—We desire any kind of manufacturing plants that will employ labor and build up our city. We are located at junction point of two of the best railways in the state, insuring easy shipping facilities and low rates, a fine distributing point for the whole Northwest. Our city has no standing offer, but would meet any new enterprise with all possible encouragement; think they would give free site and free city water and remit taxes.

NEW INDUSTRIES—PART III.

An analysis of the totals furnished by the United States Census Bureau for the twelfth census year, 1900, of the manufacturing and mechanical industries of Iowa in order to show the stability and profitable possibilities of such enterprise by investors and to encourage the expansion of manufacturing by prospective investors in the state.

Exhibit 1. Contains an analysis of the eighteen leading counties in manufacture as follows: Blackhawk, Boone, Cerro Gordo, Clayton, Clinton, Des Moines, Dubuque, Fayette, Lee, Linn, Mahaska, Marshall, Muscatine, Polk, Pottawattamie, Scott, Wapello and Woodbury.

Exhibit 2. Contains an analysis of thirty-five leading manufactures and mechanical industries in Iowa as follows: Agricultural implements, blacksmithing and wheelwrighting, boots and shoes, brick and tile, brooms and brushes, buttons (pearl), carpentering, carriage and wagons, cheese and butter, clothing (men's custom made), clothing (men's factory product), confectionery, flour and grist mills, food preparations, foundries and machine shops, fruits and vegetable (canning), furniture manufacture, gas illuminating and heating, gloves and mittens, liquor manufacture (malt), lumber and timber products, lumber planing mill products—such as sash doors and fixture manufactures; masonry brick and stone, millinery, custom work; painting house and sign; paper hanging, patent medicine, plumbing, printing newspapers and periodicals, saddlery and harness manufacturing, slaughtering and wholesale meat packing, starch manufacturing, sugar and molasses refining, tobacco and cigar manufacturing, woolen goods.

In order to assist a ready comprehension of the terms used in these exhibits of this part of the chapter it may be well to state that the total value of lands, buildings, machinery, tools, imple-

ments, cash and sundries are included in the term *capital*. Adult males, adult females and children under sixteen are included in the term *employees*. The total expenses incurred by rent of works, rent of offices, interest, taxes, and contract work are included in the term *miscellaneous expenses*. The total expense incurred by purchase of raw materials for use or manufacture; mill supplies, freight, fuel and rent of power and heat are included in the term *cost of material*. Value of product, is understood as the selling price f. o. b. and not the retail value or price to consumers. *Total gross expense* is made plain by the simple form provided by the tables as is the balance or *total net profit*.

The percentages of the product is displayed for the purpose of exhibiting the several peculiar features accompanying different industries and has been computed in order to supply a demand frequently made, especially as it applies to the main items of expense, and reward to those who invest or manage and those who co-operate by labor.

NEW INDUSTRIES—PART III.

EXHIBIT No. 1.

Showing analysis of product, expense, and profit of manufactures and mechanical industries in eighteen selected counties of Iowa.

BLACK HAWK COUNTY MANUFACTURES.		Per cent of product.
TOTAL CAPITAL, \$2,104,542. PER CENT PROFIT ON INVESTMENT, 26.83.		
Value of manufactured product	\$ 4,071,821	
Cost of material	\$ 2,641,551	64.88
Miscellaneous expense	144,504	3.55
Salaries to 162 officials and clerks	105,978	2.60
Wages to 1,436 employees	625,649	15.36
Total gross expense	\$ 3,517,682	
Total net profit	\$ 554,139	13.61

BOONE COUNTY MANUFACTURES.

TOTAL CAPITAL, \$53,701. PER CENT PROFIT ON INVESTMENT, 35.25.

Value of manufactured product	\$ 1,194,270	
Cost of material	\$ 601,547	50.38
Miscellaneous expense	33,702	2.82
Salaries to 33 officials and clerks	21,322	1.78
Wages to 762 employees	346,234	28.99
Total gross expense	\$ 1,002,805	
Total net profit	\$ 191,465	16.03

CERRO GORDO COUNTY MANUFACTURES.

TOTAL CAPITAL, \$510,819. PER CENT PROFIT ON INVESTMENT, 43.86.

Value of manufactured product	\$ 839,879	
Cost of material	\$ 443,220	49.26
Miscellaneous expense	26,969	3.01
Salary to 80 officials and clerks	20,536	2.28
Wages to 425 employees	135,223	20.59
Total gross expense	\$ 676,081	
Total net profit	\$ 223,848	24.86

CLAYTON COUNTY MANUFACTURES.

TOTAL CAPITAL, \$644,521. PER CENT PROFIT ON INVESTMENT, 46.69.

Value of manufactured product	\$ 1,514,540	
Cost of material	\$ 1,060,045	69.99
Miscellaneous expense	25,844	1.71
Salaries to 27 officials and clerks	8,403	.55
Wages to 872 employees	119,262	7.88
Total gross expense	\$ 1,213,554	
Total net profit	\$ 300,986	19.87

NEW INDUSTRIES—CONTINUED.

CLINTON COUNTY MANUFACTURES.		Per cent of product.
TOTAL CAPITAL, \$4,756,688. PER CENT PROFIT ON INVESTMENT, 21.68.		
Value of manufactured product.....	\$ 7,265,252	
Cost of material.....	\$ 4,459,469	61.89
Miscellaneous expense.....	377,521	5.19
Salaries to 207 officials and clerks.....	235,512	3.24
Wages to 8,147 employes.....	1,161,486	15.99
Total gross expense.....	\$ 6,233,988	
Total net profit.....	\$ 1,031,264	14.19

DES MOINES COUNTY MANUFACTURES.

TOTAL CAPITAL, \$5,674,811. PER CENT PROFIT ON INVESTMENT, 16.05.

Value of manufactured product.....	\$ 6,145,776	
Cost of material.....	\$ 3,247,247	52.82
Miscellaneous expense.....	450,508	7.34
Salaries to 838 officials and clerks.....	228,417	3.72
Wages to 8,178 employes.....	1,908,587	21.80
Total gross expense.....	\$ 5,234,760	
Total net profit.....	\$ 911,067	14.82

DUBUQUE COUNTY MANUFACTURES.

TOTAL CAPITAL, \$3,478,553. PER CENT PROFIT ON INVESTMENT, 19.66.

Value of manufactured product.....	\$11,614,240	
Cost of material.....	\$ 6,396,965	54.83
Miscellaneous expense.....	1,044,201	8.99
Salaries to 612 officials and clerks.....	459,396	3.95
Wages to 5,662 employes.....	2,076,348	17.88
Total gross expense.....	\$ 9,946,907	
Total net profit.....	\$ 1,667,333	14.35

FAYETTE COUNTY MANUFACTURES.

TOTAL CAPITAL, \$1,622,954. PER CENT PROFIT ON INVESTMENT, 25.60.

Value of manufactured product.....	\$ 1,729,214	
Cost of material.....	\$ 1,065,235	61.61
Miscellaneous expense.....	37,353	2.17
Salaries to 35 officials and clerks.....	15,320	.88
Wages to 742 employes.....	849,390	20.20
Total gross expense.....	\$ 1,467,301	
Total net profit.....	\$ 261,913	15.14

NEW INDUSTRIES - CONTINUED.

LEE COUNTY MANUFACTURES.

TOTAL CAPITAL, \$4,192,064. PER CENT PROFIT ON INVESTMENT, 20.26.

		Per cent of pro- duct.
Value of manufactured product	\$ 5,907,571	
Cost of material	\$ 3,096,156	52.89
Miscellaneous expense	325,608	5.50
Salaries to 426 officials and clerks	533,955	9.04
Wages to 2,842 employes	1,104,748	18.71
Total gross expense	\$ 5,060,522	
Total net profit	\$ 847,049	14.86

LINN COUNTY MANUFACTURES.

TOTAL CAPITAL, \$6,657,961. PER CENT PROFIT ON INVESTMENT, 27.93.

Value of manufactured product	\$13,082,428	
Cost of material	\$ 9,513,605	69.78
Miscellaneous expense	545,596	4.02
Salaries to 341 officials and clerks	289,108	2.12
Wages to 3,184 employes	1,424,523	10.44
Total gross expense	\$11,772,829	
Total net profit	\$ 1,559,594	13.64

MAHASKA COUNTY MANUFACTURES.

TOTAL CAPITAL, \$672,834. PER CENT PROFIT ON INVESTMENT, 36.35

Value of manufactured product	\$ 1,198,227	
Cost of material	\$ 566,120	47.24
Miscellaneous expense	72,648	6.07
Salaries to 52 officials and clerks	80,794	2.57
Wages to 653 employes	284,072	23.71
Total gross expense	\$ 953,629	
Total net profit	\$ 244,598	20.41

MARSHALL COUNTY MANUFACTURES.

TOTAL CAPITAL, \$3,245,431. PER CENT PROFIT ON INVESTMENT, 10.01.

Value of manufactured product	\$ 5,086,205	
Cost of material	\$ 3,392,079	66.69
Miscellaneous expense	209,909	4.14
Salaries to 116 officials and clerks	115,946	2.29
Wages to 1,715 employes	742,079	14.59
Total gross expense	\$ 4,460,913	
Total net profit	\$ 625,292	12.29

NEW INDUSTRIES—CONTINUED.

MUSCATINE COUNTY MANUFACTURES.		Per cent of pro- duct.
TOTAL CAPITAL, \$3,886,703. PER CENT PROFIT ON INVESTMENT, 17.56.		
Value of manufactured pr. duct.	\$ 6,088,828	
Cost of material	\$ 3,918,909	64.81
Miscellaneous expense	219,554	3.64
Salaries to 141 officials and clerks.	182,875	2.90
Wages to 2,920 employes	1,086,780	18.65
Total gross expense	\$ 5,856,068	
Total net profit	\$ 652,725	11.30

POLK COUNTY MANUFACTURES.

TOTAL CAPITAL, \$3,050,689. PER CENT PROFIT ON INVESTMENT, 26.81.		
Value of manufactured product.	\$10,856,986	
Cost of material	\$ 5,178,612	47.65
Miscellaneous expense	901,105	8.29
Salaries to 742 officials and clerks.	606,010	5.59
Wages to 4,780 employes	2,067,979	18.98
Total gross expense	\$ 8,758,706	
Total net profit....	\$ 2,118,280	19.51

POTTAWATTAMIE COUNTY MANUFACTURES.

TOTAL CAPITAL, \$1,426,472. PER CENT PROFIT ON INVESTMENT, 41.33.		
Value of manufactured product	\$ 3,029,528	
Cost of material	\$ 1,491,733	49.25
Miscellaneous expense	178,344	5.89
Salaries to 134 officials and clerks.	116,844	3.86
Wages to 1,282 employes	652,164	21.53
Total gross expense	\$ 2,439,115	
Total net profit	\$ 590,413	19.48

SCOTT COUNTY MANUFACTURES.

TOTAL CAPITAL, \$10,990,549. PER CENT PROFIT ON INVESTMENT, 14.20.		
Value of manufactured product	\$11,720,441	
Cost of material	\$ 6,921,917	59.05
Miscellaneous expense	881,287	7.35
Salaries to 462 officials and clerks.	457,338	3.91
Wages to 4,410 employes	1,918,593	16.37
Total gross expense	\$10,159,135	
Total net profit	\$ 1,561,306	13.32

NEW INDUSTRIES—CONTINUED.

WAPELLO COUNTY MANUFACTURES.			Per cent of pro- duct.
TOTAL CAPITAL, \$3,472,604. PER CENT PROFIT ON INVESTMENT, 26 15.			
Value of manufactured product.....	\$ 9,281,773		
Cost of material.....	\$ 7,169,468		77.24
Miscellaneous expense.....	205,929		2.22
Salaries to 211 officials and clerks.....	178,698		1.93
Wages to 2,150 employes.....	819,679		8.88
Total gross expense.....	\$ 8,373,514		
Total net profit.....	\$ 908,259		9.78

WOODBURY COUNTY MANUFACTURES.

TOTAL CAPITAL, \$5,930,223. PER CENT PROFIT ON INVESTMENT, 40.33.

Value of manufactured product.....	\$15,801,139		
Cost of material.....	\$10,882,998		68.87
Miscellaneous expense.....	670,166		4.25
Salaries to 329 officials and clerks.....	297,947		1.89
Wages to 3,183 employes.....	1,514,296		9.53
Total gross expense.....	\$13,365,452		
Total net profit.....	\$ 2,435,737		15.41

NEW INDUSTRIES—CONTINUED.

EXHIBIT No. 2.

Showing analysis of product, expense and profit of thirty-five leading manufactures and mechanical industries of Iowa.

AGRICULTURAL IMPLEMENT MANUFACTURES.		Per cent of product.
TOTAL CAPITAL, \$1,878,090. PER CENT PROFIT ON INVESTMENT, 19.96.		
Value of manufactured product.....	\$ 1,508,667	
Cost of material.....	\$ 669,989	44.41
Miscellaneous expense.....	96,540	6.39
Salaries to 154 officials and clerks.....	128,472	8.19
Wages to 644 employees.....	218,489	16.14
Total gross expense.....	\$ 1,183,490	
Total net profit.....	\$ 875,177	24.87

BLACKSMITHING AND WHEELWRIGHTING.

TOTAL CAPITAL, \$2,774,287. PER CENT PROFIT ON INVESTMENT, 62.27.

Value of manufactured product.....	\$ 3,361,298	
Cost of material.....	\$1,004,890	29.88
Miscellaneous expense.....	124,716	3.72
Salaries to 6 officials and clerks.....	2,280	.06
Wages to 1,177 employees.....	508,286	14.98
Total gross expense.....	\$ 1,684,572	
Total net profit.....	\$ 1,726,726	51.96

BOOTS AND SHOES—MANUFACTURES.

TOTAL CAPITAL, \$506,757. PER CENT PROFIT ON INVESTMENT, 6.37.

Value of manufactured product.....	\$ 786,141	
Cost of material.....	\$ 507,492	64.55
Miscellaneous expense.....	18,718	2.38
Salaries to 40 officials and clerks.....	85,882	4.56
Wages to 566 employees.....	191,783	24.39
Total gross expense.....	\$ 753,825	
Total net profit.....	\$ 82,816	4.12

BRICK AND TILE MANUFACTURES.

TOTAL CAPITAL, \$3,076,355. PER CENT PROFIT ON INVESTMENT, 18.40.

Value of manufactured product.....	\$ 1,976,328	
Cost of material.....	\$ 460,813	23.29
Miscellaneous expense.....	115,817	5.87
Salaries to 94 officials and clerks.....	65,088	3.29
Wages to 1,986 employees.....	768,890	38.90
Total gross expense.....	\$ 1,410,188	
Total net profit.....	\$ 566,185	23.63

NEW INDUSTRIES—CONTINUED.

BROOMS AND BRUSHES—MANUFACTURES.			Per cent of product.
TOTAL CAPITAL, \$161,577. PER CENT PROFIT ON INVESTMENT, 60.17.			
Value of manufactured product.....	\$ 848,448		
Cost of material.....	\$ 151,621		43.82
Miscellaneous expense.....	8,883		2.52
Salaries to 17 officials and clerks.....	14,889		4.14
Wages to 240 employees.....	76,828		21.91
Total gross expense.....	\$ 251,216		
Total net profit.....	\$ 97,282		27.91

BUTTONS—PEARL—MANUFACTURES.

TOTAL CAPITAL, \$324,815. PER CENT PROFIT ON INVESTMENT, 45.65.

Value of manufactured product.....	\$ 866,593		
Cost of material.....	\$ 196,842		22.72
Miscellaneous expense.....	87,252		4.29
Salaries to 43 officials and clerks.....	26,806		3.04
Wages to 1,402 employees.....	453,086		52.86
Total gross expense.....	\$ 718,486		
Total net profit.....	\$ 148,062		17.09

CARPENTERING AND CONTRACTING.

TOTAL CAPITAL, \$1,172,124. PER CENT PROFIT ON INVESTMENT, 104.53.

Value of manufactured product.....	\$ 6,802,393		
Cost of material.....	\$ 3,627,095		53.83
Miscellaneous expense.....	509,540		7.49
Salaries to 39 officials and clerks.....	16,167		0.25
Wages to 2,992 employees.....	1,423,182		20.92
Total gross expense.....	\$ 5,576,784		
Total net profit.....	\$ 1,225,659		18.02

CARRIAGES AND WAGONS—MANUFACTURES.

TOTAL CAPITAL, \$4,087,400. PER CENT PROFIT ON INVESTMENT, 24.88

Value of manufactured product.....	\$4,981,067		
Cost of material.....	\$ 1,868,988		47.42
Miscellaneous expense.....	248,794		6.21
Salaries to 140 officials and clerks.....	112,704		2.84
Wages to 1,692 employees.....	713,901		18.16
Total gross expense.....	\$ 2,984,387		
Total net profit.....	\$ 906,680		25.87

NEW INDUSTRIES—CONTINUED.

CHEESE, BUTTER AND CONDENSED MILK MANUFACTURES.		Per cent of product.
TOTAL CAPITAL, \$3,459,017. PER CENT PROFIT ON INVESTMENT, 48.95		
Value of manufactured product	\$15,846,077	
Cost of material	\$18,501,556	85.20
Miscellaneous expense	153,990	.96
Salaries to 418 officials and clerks	81,425	.51
Wages to 1,133 employees	538,653	3.71
Total gross expense	\$14,825,624	
Total net profit	\$ 1,520,453	9.60

CLOTHING—MEN'S—CUSTOM TAILORING.

TOTAL CAPITAL, \$727,064. PER CENT PROFIT ON INVESTMENT, 79.58

Value of manufactured product	\$ 2,111,151	
Cost of material	\$ 816,390	38.66
Miscellaneous expense	122,672	5.82
Salaries to 53 officials and clerks	25,464	1.21
Wages to 1,303 employees	568,041	26.91
Total gross expense	\$ 1,532,567	
Total net profit	\$ 578,584	27.40

CLOTHING—MEN'S—FACTORY PRODUCT.

TOTAL CAPITAL, \$660,514. PER CENT PROFIT ON INVESTMENT, 18.77.

Value of manufactured product	\$ 1,584,697	
Cost of material	\$ 910,106	59.30
Miscellaneous expense	95,446	6.21
Salaries to 138 officials and clerks	101,818	6.63
Wages to 1,340 employees	368,286	19.76
Total gross expense	\$ 1,410,656	
Total net profit	\$ 124,041	8.10

CONFECTIONERY MANUFACTURES.

TOTAL CAPITAL, \$577,197. PER CENT PROFIT ON INVESTMENT, 44.05.

Value of manufactured product	\$ 1,264,530	
Cost of material	\$ 716,901	56.69
Miscellaneous expense	56,311	4.46
Salaries to 111 officials and clerks	91,612	7.23
Wages to 559 employees	145,420	11.50
Total gross expense	\$ 1,010,244	
Total net profit	\$ 254,286	20.10

NEW INDUSTRIES—CONTINUED.

FLOURING AND GRIST MILL PRODUCTS.		Per cent of product.
TOTAL CAPITAL, \$3,421,078. PER CENT PROFIT ON INVESTMENT, 24 28.		
Value of manufactured product	\$18,823,083	
Cost of material	\$11,272,217	81.54
Miscellaneous expense	804,256	2.21
Salaries to 210 officials and clerks	160,476	1.16
Wages to 1,235 employees	529,479	8.81
Total gross expense	\$12,268,428	
Total net profit	\$ 1,559,655	11.28

FOOD PREPARATIONS MANUFACTURES.

(Not including bread and bakery products.)

TOTAL CAPITAL, \$2,501,521. PER CENT PROFIT ON INVESTMENT, 30.42.

Value of manufactured product	\$ 3,604,081	
Cost of material	\$ 2,388,068	66.28
Miscellaneous expense	196,297	5.43
Salaries to 54 officials and clerks	49,510	1.88
Wages to 609 employees	209,081	5.79
Total gross expense	\$ 2,842,841	
Total net profit	\$ 761,190	21.12

FOUNDRY AND MACHINE SHOP MANUFACTURES.

TOTAL CAPITAL, \$3,782,774. PER CENT PROFIT ON INVESTMENT, 20.81.

Value of manufactured product	\$ 4,460,914	
Cost of material	\$ 2,189,680	49.06
Miscellaneous expense	200,918	4.51
Salaries to 221 officials and clerks	204,966	4.59
Wages to 2,372 employees	1,088,812	24.40
Total gross expense	\$ 3,683,859	
Total net profit	\$ 777,055	17.42

FRUITS AND VEGETABLES, CANNING AND PRESERVING.

TOTAL CAPITAL, \$1,027,321. PER CENT PROFIT ON INVESTMENT, 30.90.

Value of manufactured product	\$ 1,359,953	
Cost of material	\$ 767,281	56.41
Miscellaneous expense	68,185	4.64
Salaries to 46 officials and clerks	27,905	2.01
Wages to 669 employees	184,710	18.59
Total gross expense	\$ 1,048,481	
Total net profit	\$ 317,527	28.95

NEW INDUSTRIES—CONTINUED.

FURNITURE MANUFACTURES.		Per cent of product.
TOTAL CAPITAL, \$1,021,653. PER CENT PROFIT ON INVESTMENT, 18.87.		
Value of manufactured product	\$ 1,419,862	
Cost of material	\$ 746,574	52.58
Miscellaneous expense	108,809	7.66
Salaries to 105 officials and clerks	84,876	5.96
Wages to 860 employees	292,080	20.57
Total gross expense	\$ 1,232,189	
Total net profit	\$ 187,728	18.28

GAS MANUFACTURERS—ILLUMINATING AND HEATING.

TOTAL CAPITAL, \$4,129,984. PER CENT PROFIT ON INVESTMENT, 3.79.

Value of manufactured product	\$ 807,787	
Cost of material	\$ 208,961	25.24
Miscellaneous expense	289,017	32.06
Salaries to 90 officials and clerks	70,120	8.68
Wages to 226 employees	118,907	14.65
Total gross expense	\$ 651,405	
Total net profit	\$ 156,382	19.36

GLOVES AND MITTENS MANUFACTURES.

TOTAL CAPITAL, \$377,008. PER CENT PROFIT ON INVESTMENT, 20.21.

Value of manufactured product	\$ 288,920	
Cost of material	\$ 124,754	43.24
Miscellaneous expense	18,009	5.23
Salaries to 43 officials and clerks	81,198	10.08
Wages to 174 employees	58,958	20.07
Total gross expense	\$ 227,919	
Total net profit	\$ 56,001	19.73

LIQUORS—MALT—MANUFACTURES.

TOTAL CAPITAL, \$2,420,515. PER CENT PROFIT ON INVESTMENT, 13.13.

Value of manufactured product	\$ 1,718,911	
Cost of material	\$ 885,164	22.47
Miscellaneous expense	786,550	42.97
Salaries to 58 officials and clerks	84,186	4.92
Wages to 321 employees	189,916	11.07
Total gross expense	1,895,766	
Total net profit	\$ 818,145	18.87

NEW INDUSTRIES—CONTINUED.

LUMBER AND TIMBER PRODUCTS.		Per cent of product.
TOTAL CAPITAL, \$3,762,219. PER CENT PROFIT ON INVESTMENT, 9.02.		
Value of manufactured product.....	\$ 8,677,068	
Cost of material.....	\$ 6,324,084	72.88
Miscellaneous expense.....	842,346	8.94
Salaries to 145 officials and clerks.....	178,768	2.00
Wages to 2,798 employees.....	1,046,181	12.06
Total gross expense.....	7,886,869	
Total net profit.....	\$ 790,689	9.12

LUMBER, PLANING MILL PRODUCTS, SASH, DOORS, BLINDS AND INTERIOR FIXTURE MANUFACTURES.

TOTAL CAPITAL, \$3,576,805. PER CENT PROFIT ON INVESTMENT, 19.01.

Value of manufactured product.....	\$ 5,295,546	
Cost of material.....	\$ 3,195,248	60.84
Miscellaneous expense.....	255,979	4.82
Salaries to 137 officials and clerks.....	180,485	3.45
Wages to 2,572 employees.....	868,924	18.54
Total gross expense.....	4,615,581	
Total net profit.....	\$ 679,965	12.84

MASONRY, BRICK AND STONE CONTRACTING.

TOTAL CAPITAL, \$624,713. PER CENT PROFIT ON INVESTMENT, 41.09.

Value of product.....	\$ 1,919,219	
Cost of material.....	\$ 1,022,997	53.82
Miscellaneous expense.....	44,482	2.81
Salaries to 29 officials and clerks.....	24,582	1.28
Wages to 1,124 employees.....	570,496	29.72
Total gross expense.....	1,662,507	
Total net profit.....	\$ 256,712	13.87

MILLINERY CUSTOM WORK AND MANUFACTURES.

TOTAL CAPITAL \$1,235,043. PER CENT PROFIT ON INVESTMENT, 61.02.

Value of manufactured product.....	\$ 2,624,182	
Cost of material.....	\$ 1,890,783	52.99
Miscellaneous expense.....	170,220	6.48
Salaries to 90 officials and clerks.....	26,617	1.02
Wages to 1,258 employees.....	282,940	10.79
Total gross expense.....	1,870,560	
Total net profit.....	\$ 753,622	28.72

NEW INDUSTRIES—CONTINUED.

PAINTING, HOUSE AND SIGN.			Per cent of Pro- duct.
TOTAL CAPITAL, \$381,402. PER CENT PROFIT ON INVESTMENT, 74.78.			
Value of product.....		\$ 1,010,509	
Cost of material.....	\$ 887,895		88.40
Miscellaneous expense.....	38,236		3.79
Salaries to 33 officials and clerks.....	18,055		1.77
Wages to 766 employees.....	331,610		32.82
Total gross expense.....		725,406	
Total net profit.....		\$ 285,103	28.22

PAPER HANGING AND DECORATING.

TOTAL CAPITAL, \$76,196. PER CENT PROFIT ON INVESTMENT, 57.15.

Value of product.....		\$ 210,904	
Cost of material.....	\$ 84,045		80.85
Miscellaneous expense.....	10,874		4.92
Salaries to 17 officials and clerks.....	7,641		3.63
Wages to 121 employees.....	65,293		30.95
Total gross expense.....		\$ 167,853	
Total net profit.....		\$ 43,551	20.65

PATENT MEDICINE MANUFACTURES.

TOTAL CAPITAL, \$312,019. PER CENT PROFIT ON INVESTMENT, 78.44.

Value of manufactured product.....		\$ 1,860,643	
Cost of material.....	\$ 800,883		22.11
Miscellaneous expense.....	201,303		14.81
Salaries to 296 officials and clerks.....	596,531		29.14
Wages to 192 employees.....	65,784		4.88
Total gross expense.....		\$ 964,506	
Total net profit.....		\$ 896,047	29.11

PLUMBING, HEATING, GAS AND STEAM FITTING.

TOTAL CAPITAL, \$575,987. PER CENT PROFIT ON INVESTMENT, 67.28.

Value of product.....		\$ 1,780,085	
Cost of material.....	\$ 925,992		52.02
Miscellaneous expense.....	67,183		3.77
Salaries to 46 officials and clerks.....	24,992		1.40
Wages to 729 employees.....	574,470		21.04
Total gross expense.....		\$ 1,592,640	
Total net profit.....		\$ 387,366	21.77

NEW INDUSTRIES—CONTINUED.

PRINTING AND PUBLISHING NEWSPAPERS AND PERIODICALS.			Per cent of product.
TOTAL CAPITAL, \$4,708,049. PER CENT PROFIT ON INVESTMENT, 86.10.			
Value of product		\$ 4,985,453	
Cost of material	\$ 1,083,549		21.93
Miscellaneous expense	414,660		9.01
Salaries to 523 officials and clerks	898,965		8.09
Wages to 8,963 employees	1,811,179		26.57
Total gross expense		\$ 3,237,893	
Total net profit		\$ 1,698,070	84.40

SADDLERY AND HARNESS MANUFACTURES.

TOTAL CAPITAL, \$2,977,146. PER CENT ON INVESTMENT, 28.54.

Value of manufactured product		\$ 3,278,972	
Cost of material	\$ 1,705,432		52.09
Miscellaneous expense	163,253		5.13
Salaries to 116 officials and clerks	65,954		1.75
Wages to 1,230 employees	493,651		15.07
Total gross expense		\$ 2,424,289	
Total net profit		\$ 849,683	25.96

SLAUGHTERING AND MEAT PACKING.

TOTAL CAPITAL, \$6,264,578. PER CENT PROFIT ON INVESTMENT, 83.18.

Value of product		\$25,296,518	
Cost of material	\$21,195,066		83.78
Miscellaneous expense	437,103		1.73
Salaries to 190 officials and clerks	193,056		.77
Wages to 2,874 employees	1,201,681		4.74
Total gross expense		\$23,029,906	
Total net profit		\$ 2,266,612	8.98

STARCH MANUFACTURES.

TOTAL CAPITAL, \$700,064. PER CENT PROFIT ON INVESTMENT, 8.72.

Value of manufactured product		\$ 896,831	
Cost of material	\$ 623,814		69.55
Miscellaneous expense	50,162		6.60
Salaries to 85 officials and clerks	37,842		4.22
Wages to 327 employees	114,881		12.81
Total gross expense		\$ 885,729	
Total net profit		\$ 61,102	6.82

NEW INDUSTRIES—CONTINUED.

SUGAR AND MOLASSES MANUFACTURES.			Per cent of prod- uct.
TOTAL CAPITAL, \$107,582. PER CENT PROFIT ON INVESTMENT, 84.04.			
Value of manufactured product	\$ 215,388		
Cost of material	\$ 130,875		60.66
Miscellaneous expense	14,827		6.80
Salaries to 17 officials and clerks	13,480		6.25
Wages to 63 employees	20,000		9.28
Total gross expense	\$ 178,762		
Total net profit	\$ 86,626		17.00

TOBACCO AND CIGAR MANUFACTURES.

TOTAL CAPITAL, \$1,264,097. PER CENT PROFIT ON INVESTMENT, 31.39.

Value of manufactured product	\$ 2,576,884		
Cost of material	\$ 948,991		36.83
Miscellaneous expense	412,818		16.02
Salaries to 126 officials and clerks	117,006		4.54
Wages to 1,856 employees	700,777		27.20
Total gross expense	\$ 2,179,592		
Total net profit	\$ 396,792		15.41

WOOLEN GOODS MANUFACTURES.

TOTAL CAPITAL, \$494,074. PER CENT PROFIT ON INVESTMENT, 4.66.

Value of manufactured product	\$ 296,500		
Cost of material	\$ 175,426		59.16
Miscellaneous expense	16,831		5.68
Salaries to 26 officials and clerks	16,611		5.60
Wages to 256 employees	64,596		21.79
Total gross expense	\$ 273,464		
Total net profit	\$ 23,036		7.77

NEW INDUSTRIES—PART IV.

WATER POWER.

This part of the chapter on new industries of Iowa is devoted to special mention of the splendid water powers of Iowa and the possibilities of their further development. The following is a list of twenty-four of the larger ones that are capable of producing power for manufacturing purposes. One each at the following named localities: Alden, Hardin county; Algona, Kossuth county; Anamosa, Jones county; Bonaparte, Van Buren county; Brighton, Washington county; Cedar Falls, Black Hawk county; Cedar Rapids, Linn county; Charles City, Floyd county; Clermont, Fayette county; Coon Rapids, Carroll county; Des Moines, Polk county; Elkader, Clayton county; Hawarden, Sioux county; Iowa City, Johnson county; Iowa Falls, Hardin county; Keokuk, Lee county; Keosauqua, Van Buren county; Monticello, Jones county; Nashua, Chickasaw county; Nora Springs, Floyd county; Osage, Mitchell county; Ottumwa, Wapello county; Rockford, Floyd county; Waverly, Bremer county; Waterloo, Black Hawk county.

In considering the possibilities of the above mentioned water powers, there is perhaps none that is equal to that of Keokuk, which is essentially a river improvement which happily couples with it unlimited power, some idea of which may be gained by the following report:

PROPOSED WATER POWER DEVELOPMENT OF THE DES MOINES RAPIDS OF THE MISSISSIPPI RIVER NEAR KEOKUK, IOWA.

Report by Lyman E. Cooley.

The Des Moines rapids of the Mississippi river are immediately above the city of Keokuk, Iowa, between the states of Illinois and Iowa, with the state of Missouri a few miles to the southwest and beyond the Des Moines

river. The Mississippi river here flows to the south in latitude 40 degrees 27 minutes north and longitude 91 degrees 22 minutes west.

The rapids proper lie in a rock gorge cut in the Keokuk limestone, quite uniformly seven-eighths mile wide between bluffs and twelve miles in length between Montrose and Keokuk. The river bed itself is generally three-fourths mile wide and the floor is remarkably uniform in elevation across the width from shore to shore, so uniform as to be practically covered at low water.

The declivity at standard low water may be taken at 23.8 feet and at extreme high water at 15.7 feet. The slope is not uniform being but 3.6 feet at low water and 4.2 feet at high water over the upper four and one-half miles between Montrose and Nashville. Below Nashville, the slope is broken at low water by "chains" of more resisting rock.

The United States Canal extends along the west, or Iowa, shore between Nashville and Keokuk and has three locks, one at either end and one intermediate. It was not found necessary to carry this canal over the entire rapids, and the west shore presented the most favorable conditions for canal construction.

The extreme range for the twenty years, 1881-1900, at Nashville, is twelve feet and at Keokuk, 20.7 feet. The standard low water volume is taken at 20,000 cubic feet per second and the extreme high water volume at 372,500 feet per second. The drainage area above Nashville is taken at 111,246 square miles, the mean volume for twenty years, as deduced from the mean gauge curve, is 62,000 feet per second, corresponding to an average run-off of about 7.5 inches from the entire basin, and the mean fall from Nashville to Keokuk is seventeen feet.

GOVERNING FEATURES.

Several features are at once evident as determining the general project for developing the water power of the Des Moines rapids.

1. The range in fluctuation from low to extreme high water at the foot of the rapids is much greater than at Nashville, 1.7 times (nearly the same at Montrose), while it is double that at intermediate points, as Sandusky. This great variation makes wide changes in fall at different stages of water and drowns the declivity of the lower rapids in high water. The upper part of the rapids is therefore most efficient and yields better results for the expenditure.

2. The head of water must be carried by canal along the east shore as the west shore is now occupied by the navigation canal. No advantage commensurate with the cost is obtained by heading this canal above Sonora Point, nearly opposite Nashville, owing to the relatively flatter slopes up stream. The presence of Cheney creek and the shore bar fixes the lower end of the canal in this vicinity, and the bight in the shore line facilitates the construction of a broad basin and provides room for power stations at the lower end. The site is also favorable for construction on account of the high elevation of the rock in the river bed.

3. As a canal and wing-dam project, no reduction in cost in proportion to reduction of power is likely to be effected by selecting other initial and terminal points. There is a considerable low water fall from the pro-

posed power site to the bridge, but owing to the higher rock and less favorable conditions of the east shore as compared to the west shore, the development of this fall by means of a tail-race will not be justified. The location of the canal is restricted as closely to the east shore as practicable owing to the proximity of the low water channel over the rapids.

4. Additional power is most cheaply produced by means of a dam from the head of the power canal at Sonora Point to the head of the navigation canal at Nashville. Little cost is added to the canal as the banks are necessarily carried to the high water limit in the wing-dam project. Such dam utilizes the fall of the rapids above in the most practicable manner, and may utilize part of the range above Montrose, but its height is limited by the back-water effect or overflow at the bank full stage, generally ten to twelve feet above low water in the big bottoms above Fort Madison. Fortunately the land to be affected is largely limited to narrow margins below Fort Madison, so that a considerable height is permitted. Local conditions, as high water at dam site, and the head works of the navigation canal and the length of dam are factors for consideration. The dam puts under control the entire low water flow of the river.

5. The power created by the dam and canal are so large that its increase by the construction of a tail-race to utilize the low-water fall below the site of the power station will be eventually justified when the demand for additional power shall warrant. This will be a work of some magnitude, but no additional installation will be required.

6. The progressive development above indicated lends itself to an economical construction program without material loss, provided the design is properly made at the outset, and it is a rational procedure in harmony with the probable market for the power.

7. Other projects, as by the construction of a dam at an intermediate point on the rapids, are practicable, but involve material changes in the upper reaches of the navigation canal and the preliminary development by wing-dam would be less effective. A dam at the lower chain, near the foot of the rapids, would entirely do away with the navigation canal and substitute a single lock, but would not permit a progressive development. Some such design might have great merits were there no navigation canal or were same in control of the power company, but in view of the actual situation, the working up of such schemes have not seemed justifiable.

8. The carrying out of a dam project is in harmony with public policy as affording a material improvement of the navigation of the river for some twenty-five miles above the dam site and such development may form part of some ultimate project for the radical improvement of the river.

THE PROJECT.

It is apparent that the design must be worked out as a whole and in the order of dam, canal and tail-race; while the actual execution will be progressive, as demanded by the needs for power, and in the order of canal dam and tail-race. The conditions to be produced by a dam are essential to a proper design of canal, and the tail-race conditions are essential to a proper installation, in order to avoid great waste and imperfect results in a progressive scheme.

THE DAM.

The purposes of a dam are two-fold:

1. The low water volume is fixed in amount and the power available is measured by the head that can be produced. The higher heads lessen the cost of the installation per unit of power and, within limits, the installation is also more efficient. The higher the dam the less the excavation in the canal for a given volume of water, and the actual cost is divided by a larger horse power.

2. The dam also provides a large pond, some twenty-five square miles of surface as actually designed, which is a very practical storage reservoir at low water. In a general market supply a portion only of the power will be continuous through the twenty-four hours, and a few inches of fluctuation will enable the variable powers to be largely increased. It is probable that the actual horse-power hours that could be sold under commercial conditions would be increased by not less than fifty per cent over what would be feasible without a reservoir and with the same heads and where the maximum is limited by the actual flow of the stream at the time of use.

While the height of dam contributes to both the foregoing objects, there are positive limitations. Backwater in time of floods should not materially increase the overflow of extensive bottom lands and damage large riparian interests. The shore margins of the power canal and the height of the outer bank of same are important considerations. The guard lock at the head of the navigation canal is also a consideration, but the walls can be readily raised.

The foregoing considerations call for a minimum range on the dam, or the high water as little as may be above the crest. This may be accomplished through length of crest and by such form of crest as will give the least depth for a given volume of water. Any dam that effects low water level by a considerable amount will raise high water sensibly; any dam that does not reach to the high water limit will have the depth over same increased by drowning, and a dam above high water will have free discharge and the minimum range, though drowning to one-third the depth on crest does not have a large effect.

A consideration of all these matters in conjunction with the actual site, the up-stream slopes, the situation at canal head, the position of the low water channel, progressive development and the initial use of a part of the dam as a wing-dam, determines the following:

Dam crest to be ten feet above the zero of the Nashville gauge; to be 6,000 feet long; to spring from the outer canal bank 2,000 feet below Sonora Point and to gradually swing out from shore but not to infringe on the low water channel at the 2,000 foot point, thence on a course more directly across the river to the head of the navigation canal. The first two thousand feet opposite and below Sonora Point, partially constructed, is virtually a wing-dam and extension of the power canal.

The depth on the crest of this dam is estimated at 6.7 feet in extreme flood without use of canal. With canal in use and such weirs and bear-trap as provided for the basin the depth should never exceed 6.0 feet. These figures are based on Cornell University—Section No. 19. (See

Transactions American Society of Civil Engineers, XLIV, p. 284, 1900). The particular form of crest proposed has not been experimentally determined, but it is believed that it will give more efficient results and that the limiting depth will be from 0.3 to 0.5 feet less.

The extreme height on crest is therefore taken at 6.0 feet, or sixteen feet on Nashville gauge, which is 3.9 feet above extreme high water and 2.1 feet above top of guard lock.

The effect of backwater has been a matter of expert evidence ever since dams were built and is usually exaggerated. Its determination is peculiar to each case and is one of the most obscure problems in hydraulics. A preliminary consideration gives the following limits: In extreme high water the surface will be raised at Montrose by 2.1 feet (half the slope is drowned out); at Fort Madison by 0.8 foot; at Dallas by 0.4 foot, and practically nothing at Burlington. The area of marginal lands are about 550 acres above the high water of the United States Engineer's profile, and these lands are not of great value.

The water has ranged above 8.2 feet on the Nashville gauge for 167 days in twenty years (1881-1900), corresponding to a flow of about 200,000 cubic feet per second. The height on the dam is taken at 4.37 (4.0 feet with canal in use). The water is not raised above the United States Engineer's high-water line at Montrose or above. It is raised above the stage corresponding to 8.2 feet on the Nashville gauge as follows: Montrose 3.2; Fort Madison 1.3; Dallas 0.6.

At low water corresponding to 20,000 feet per second and 0.1 feet on the Nashville gauge, no water over-dam, the estimated raising is as follows: Montrose 6.4; Fort Madison 4.4; Dallas 1.75; the effect disappearing practically half way between Dallas and Burlington. The area of water, as affected by dam, may be taken at twenty-five square miles and this constitutes the reservoir aforementioned.

THE CANAL.

The canal proper begins some 2,000 feet below the upper side of Sonora Point, though considerable excavation is required over this stretch to produce an ample water-way from the low water channel of the river and adjacent to that portion of the dam which is to be partially constructed at the outset and used as a wing-dam. It is believed that the shore configuration and the treatment at this locality will largely avoid the running of ice and drift into the canal.

The canal is designed to carry 20,000 feet per second at standard low water at the level of the crest of the dam, and the prism will have a section of 7,050 square feet, a depth of twenty feet (ten feet below zero of Nashville gauge) and a bottom width of 335 feet, with a wall on the river side and the slope of the bank, trimmed in localities, on the shore side. The slope in canal bottom is made 0.8 foot in five miles to the head of the basin and is computed for the conditions when the river is carrying the mean volume.

The high water level in canal is taken at six feet above the dam crest, giving a section of 9,300 square feet. The volume required through the canal at this stage is about double that at low water and the slope there.

fore is considerably greater, but the extreme is of rare occurrence and short in duration.

The location of this canal is closely restricted to the shore line, owing to the proximity of the low water channel throughout most of its length, and little latitude is allowed for variation to reduce amount of excavation. This excavation is practically all rock and this fact dictates the type of river bank which is designed as a masonry wall carried to the high water line and backed by the waste excavation and protected on the river side by slope paving and a toe-wall. No more efficient or cheaper type of construction has suggested itself and it has the merit of permanent work. The surplus excavation not otherwise required should go into the roadway on the shore side.

The basin begins at the fifth mile and extends for three-fourths mile, gradually widening to one-fourth mile at lower end about one-fourth mile above Cheney creek. The outer line is fair with the line of the shore bar below and does not encroach on the proper flowing channel of the river. A bear-trap section is to be constructed in the outer wall to run off ice and drift that may find their way through the canal and for producing a flushing current in the canal at low water, and high water overflow weirs can be added if found desirable.

The lower end of the basin is designed to be closed by the walls required in connection with power stations and will form part of the installation.

It is practicable to divert Cheney creek to a location one-fourth mile south and extend the basin one-fourth mile (to the present mouth), on the shore side and by one-third mile on the river side. This would materially reduce the excavation in the tail-race when the same shall be undertaken. There may be other determining conditions, however, as the development of local industrial establishments and the sites therefor which will have a bearing on the matter.

The initial uses of the canal for a wing-dam proposition does not suggest material changes except in the first installation. Extreme high water is within four feet of the top of the wall, or the level with the dam. The low water prism is relatively less efficient, as the water is some 0.3 foot lower in elevation at Sonora Point than at Nashville, and so large a proportion of the flow, drawn off through the canal, will lower it about a foot more, so that the depth flowing in the canal will be less than nine feet and the slope in the canal will be excessive. At normal low water the conditions are more satisfactory. To remedy the conditions would require an excessive amount of excavation which does not seem justified. The matter is significant as showing that the practical difference between a canal for a wing-dam proposition only involves a bank four feet less in height and less shore grading with surplus excavation, than for the dam which raises low water in the river by some ten feet.

The canal is to be provided with piers and a bridge at the entrance and so executed as to facilitate the placing of calissons or a coffer-dam, should same be required for any purpose.

THE TAIL-RACE.

The execution of a tail-race is costly owing to the continuously high level of the bed-rock along the east shore from the power station to the bridge. It should add some thirty per cent to the effective low-water head and increase the available power by that amount, but the execution of the tail-race on the basis of wing-dam requirements will probably complicate the works when it becomes necessary to enlarge for the requirements of the dam proposition, unless it be found feasible to remove this rock economically by some form of dredging machine. The construction of the dam will be a more useful application of the money, as the power will be multiplied thereby more than four times.

After the dam development, the tail-race will add fifteen to twenty per cent to the low-water head and to the constant available power, without practically other additions to cost, and it can be undertaken when the market demands the additional power. This race will be built behind the power station and alongside the shore bar to the vicinity of the bridge and be guarded by a high-water bank formed from the excavated material and extending down from the outer corner of the basin. This bank does not need to be tight in the sense of the canal bank proper and does not require the same care in construction.

The effect of the tail-race diminishes from nearly four feet at low water to less than one foot at extreme high water. This is due to the drowning at the lower end of the rapids as before noted.

The consideration of the tail-race is material at the outset in view of its bearing on certain features of design for power stations and their installation.

THE EFFECTIVE HORSE-POWER.

The effective horse-power is measured on the turbine shaft and involves three factors: the volume of water, the available head or fall and the efficiency of turbines.

If the turbine efficiency is assumed at eighty per cent, then eleven cubic feet of water per second, or one foot falling eleven feet, will generate one effective horse-power. In preliminary calculations, twelve feet may usually be taken for the gross head, or an efficiency of seventy-three per cent, the allowance of seven per cent being made for slope in canals, races and for other losses.

The zero of the Nashville gauge is 19.1 feet above the zero of the Keokuk gauge, and standard low water is taken at 20,000 cubic feet per second which is equivalent to one foot below zero of gauge at Keokuk. A dam ten feet high on the Nashville gauge will therefore give a gross fall of 30.1 feet or 50,000 horse-power. Again 50,000 horse-power calls for an effective fall of 27.5 feet, which allows 2.6 feet for loss in canals, races, etc. As will appear later, these losses are within the limits of the design.

THE VOLUME.

The determinations of volume rest on measurements by the United States Engineers of low stages at Burlington in 1879, and a complete series at Hannibal in 1880-1. A painstaking study of gauge relations for Hanni-

bal, Warsaw, Keokuk, Nashville and Burlington has been made for the purpose of determining the normal ratios and the equivalent volumes, especially on the Nashville gauge, this gauge being free from backwater effects of tributaries below and located at the controlling point of the problem. Such determinations are subject to error, especially at low and high water limits, through change in plane due to a shifting river bed, through varying overflow conditions and through tributary action, but intelligent study can largely discount such effects.

The normal equivalents may be tabulated as follows:

Nashville Gauge.	Volume Second-Feet.	Keokuk Gauge (Equivalent.)	Fall.
0	19,000	-1.26	20.86
1	30,100	1.86	18.74
2	43,000	3.20	17.90
3	58,200	4.86	17.17
4	77,800	6.66	16.45
5	99,800	8.57	15.73
6	126,800	10.07	15.03
7	158,100	11.82	14.28
8	195,600	13.54	13.55
9	233,600	15.26	12.84
10	276,100	16.99	12.11
11	320,700	18.56	11.54
12	367,700	19.67	11.43

Standard low water is taken at 0.1 Nashville, and 1.0 Keokuk, corresponding to a flow of 20,000 and a fall of 20.2 feet. Extreme high water is taken at 12.1 Nashville, and 19.77 Keokuk, corresponding to a flow of 372,500 and a fall of 11.43 feet. The actual gauge reading at Keokuk may differ from the equivalent above owing to the unsystematic relations of the Des Moines river discharge which produces variable backwater effects. In a broad average the gauge at Keokuk will range somewhat above the equivalent. Such determinations are approximate and have not the value of direct measurements at the site though the regimen of the river is comparatively stable. They are useful as disclosing the habits of the river over long reaches; they are the best data that can now be produced, and they are sufficiently close for all present purposes.

In connection with the foregoing the gauge records for the twenty years from 1881 to 1900 inclusive, for both Nashville and Keokuk, have been reduced. Such a period is usually considered sufficient for reliable interpretation. The mean gauge curve has been made up from the mean for each day in all the year and the extreme high and low water curve from the extreme for each day in any year. These curves represent the normal and the extreme expectation and they furnish as well a record of mean and extreme conditions.

Some of the significant results may be exhibited as follows:

Nash-ville Gauge.	Volume Second Feet.	Conditions in 20-Year Period.	Keokuk Gauge (actual).	Fall.
12.1	372,500	Extreme H. W., U. S. Engineers.....	19.6	11.6
10.0	276,100	Above for 48 days.....	17.97	11.18
9.0	283,600	Above for 105 days.....	15.97	12.18
8.2	201,300	Above for 167 days.....	15.16	12.14
7.6	178,800	Average high water.....	14.1	12.6
6.9	129,900	H. W. mean gauge curve.....	10.4	14.6
3.21	62,000	Apx. mean volume.....	5.44	16.87
2.98	58,000	Mean gauge.....	5.06	17.02
1.6	57,600	Below for 2,414 days.....	2.47	18.23
1.2	82,500	L. W. mean gauge curve.....	1.8	19.0
0.46	23,750	L. W. average extreme.....	-6.04	19.6
0.30	22,000	Below for 67 days.....	-0.63	19.96
0.10	20,000	Below for 9 days.....	-1.53	20.73

The mean volume above given will be slightly increased by summing the yearly curves, but the average run-off will not greatly exceed 7.5 inches on the 111,246 square miles of area above Nashville, as hereinbefore noted.

A volume of 200,000 feet, or 8.17 on Nashville gauge, was exceeded in 1881-2-3-4-5-6-8 and 1892-3-7.

Mean high water occurs (Nashville) on May 7, and mean low water on December 9, and as given in above table. There is also a low water of September 6, of 1.5, or 36,300 feet, and a crest on October 24, of 2.4, or 48,600 feet. The hydrograph or gauge curves show the variations graphically for the entire year.

The quantities heretofore given are based on an open river. The effect of an ice cover is to increase the frictional resistance thus increasing the cross section of the stream and raising the gauge. The thickness of the ice also raises the gauge. Only direct observations and known thicknesses of ice will enable a local gauge equivalent to be determined with any certainty.

The transfer of winter discharges from Hannibal indicates that the general effect of an ice cover at Nashville is to make the gauge reading 1.4 feet for the standard low water discharge of 20,000 cubic feet, a rise on gauge due to ice of 1.3 feet.

The report of the United States Deep Water-ways Commission, 1896, gives an ice record of twenty years at Montrose and of twenty-six years at Keokuk, and the averages are as follows: Montrose, January 3, February 20, or forty-eight days. Keokuk, January 5, February 25, or fifty-one days.

The Nashville mean curve gives an elevation of 2.3 for January 3, and 2.7 for February 25, and the elevations at Keokuk are substantially concurrent. Those readings are so much in excess of the equivalent of 20,000 feet, that the average winter conditions may be assumed to give a safe margin.

There are probably winter conditions in some years that give less than 20,000 feet but what the minimum may be or how long continued is a matter of speculation. Such minimum would appear to be exceptional. It is a matter of observation on some western rivers that the low water volume ceases to decrease and may even increase after vegetation dries up.

and ceases to draw on the store of ground water. No sufficient study has been given the Upper Mississippi to determine such effects. It is significant that after the low water of December 9, the mean gauge curve shows a rise and an increment throughout the winter such as would indicate an ice cover increasing in thickness and perhaps with little or no diminution in volume.

THE AVAILABLE HEAD.

The gross head between Nashville and Keokuk, as determined by gauge equivalents and as actually existing for characteristic stages is given in the foregoing tables. The gross heads for the same stages and volumes, dam to Keokuk, dam to power station and wing-dam to power station, are as follows:

Nash. Gauge.	Keokuk Gauge.	Height on Dam.	*P. S. above Keokuk.	Dam to Keokuk.	*Dam to P. S.	*Wing-dam to P. S.
0	-1.26	1.00	5.96	31.26	25.30	14.40
1	1.86	1.83	4.84	29.17	24.88	14.40
2	3.20	1.66	3.50	27.56	24.06	14.40
3	4.98	1.99	2.62	26.16	23.24	14.25
4	6.66	2.37	2.68	24.82	22.14	13.77
5	8.37	2.80	2.40	23.53	21.18	13.53
6	10.07	3.28	2.14	22.29	20.15	12.89
7	11.82	3.77	1.90	21.05	19.15	12.33
8	13.54	4.29	1.67	19.85	18.18	11.89
9	15.26	4.84	1.45	18.68	17.23	11.39
10	16.99	5.40	1.24	17.51	16.27	10.87
11	18.56	6.01	1.10	16.45	15.35	10.44
12	19.67	6.64	1.00	16.07	15.07	10.43

*Power station.

The depth on dam depends on Cornell experiment No. 19, as hereinbefore noted. The elevations at power station are approximate and cannot be certainly determined with the data at command, but are not believed to be seriously in error.

The grossheads above are subject to certain deductions as follows:

1. Dam to Keokuk; lowering on crest of dam to volume drawn by canal, slope in canal and slope in tail-race.
2. Dam to power station; same as above, omitting tail-race.
3. Wing-dam to power station; lower elevation at head of canal than at Nashville lowering of river due to volume drawn by canal, and the slope in canal.

Nash. G.	Volume in Canal.	1 Dam and Race.	2 Dam to P. S.	3 Wing-Dam.	
				Volume.	Head.
0	19.0	27.6	23.6	10.1	10.9
0.1	20.0	27.4	23.6	10.0	11.0
1	20.9	26.6	23.4	9.2	12.0
2	22.2	25.4	23.7	8.8	12.6
3	23.5	24.2	21.9	8.7	12.3
4	24.9	23.0	20.8	8.9	12.5
5	26.2	21.8	19.8	9.1	12.2
6	27.6	20.6	18.8	9.4	11.8
7	29.3	19.4	17.8	9.7	11.4
8	30.9	18.1	16.7	10.1	10.9
9	32.9	16.9	15.7	10.6	10.4
10	35.1	15.7	14.7	11.2	9.9
11	37.0	14.6	13.7	11.5	9.5
12	38.8	14.2	13.4	11.7	9.5

Computations show that the horse-power overruns the assumptions for gross head except at extreme stages. This can be adjusted by re-computation, except for lowest stages. In No. 1, the low water slope in tail race is excessive. In No. 2, the absolute elevation at the power station is high with respect to low water at Keokuk. In No. 3, the slope in canal is excessive and a deeper canal is the remedy. Generally, however, the design is shown to be competent, and any change involves additional cost.

RULING CONDITIONS.

The foregoing tabulations are liable to mislead in making a design, as they unduly accentuate the extremes and do not give proper weight to the ruling conditions. The following table gives the fall as deduced from gauge equivalents and the effective heads for characteristic stages.

Nash- ville Gauge	Keokuk Gauge.	Vol. 1000 Feet.	Conditions 20-Year Period.	1 Dam & Race.		2 Dam & P. S.		3 Wing-Dam.	
				Gross Head	Net Head	Gross	Net.	Gross	Net.
11.8	19.5	358.0	High Water.....	16.1	14.2	15.1	13.4	10.4	9.4
8.2	13.9	201.8	Above for 167 days....	19.6	17.9	18.1	16.6	11.8	10.9
5.9	9.9	129.9	H. W. mean curve.....	22.4	20.7	20.8	18.9	12.9	11.8
3.0	4.9	58.2	Mean Stage.....	26.2	24.2	23.2	21.9	14.2	12.7
1.6	2.5	37.6	Below 2.414 days.....	23.2	25.9	24.4	23.0	14.4	12.8
1.2	1.8	32.5	L. W. mean curve.....	28.7	26.2	24.6	23.2	14.4	12.0
0.8	-0.45	22.0	Below for 67 days.....	30.6	27.2	25.5	21.8	14.4	11.4
0.1	-1.0	20.0	Standard L. W.....	31.1	27.4	25.8	23.6	14.4	11.0

The above tabulation indicates the general or normal range in effective heads as follows:

1. Dam and tail-race.....18 to 27 feet.
2. Dam without race.....17 to 24 feet.
3. Wing Dam.....11 to 13 feet.

Heads greater or less than the above are to be regarded as exceptional. These erratic heads must be reckoned with, but are not controlling features in an installation.

It appears that 50,000 effective horse-power may be had with the complete design, 43,000 without the tail-race and 10,000 with wing-dam alone.

EFFICIENCY OF TURBINES.

In the above exhibits, the efficiency of turbines is assumed at eighty per cent of the effective head. This may be true for some particular speed and gate opening, but for generators, a uniform speed is important, and under the large variation in head, the quantities of water used may differ materially from those assumed. If efficiency is obtained at low water, the quantity is ample at other times.

OUTLINE SPECIFICATIONS.

The Water Power Canal is to be located in the river bed adjacent to the east shore and to the east of the boat channel over the rapids and is to begin 2,000 feet below the upper side of Sonora Point and to extend down stream five miles to the head of the basin; and said basin is to be three-fourths mile long and one-fourth mile wide from the shore line at a point one-fourth mile north of the outlet of Cheney creek, all as shown on plan.

The prism of said canal is to be 335 feet wide on the bottom at elevation of ten feet below zero of Nashville gauge and with a slope of 0.8 foot to the head of the basin. The shore side is to be the natural shore face, trimmed to one and one-half to one, except when heavy excavation may be involved. The river face is to be formed by a channeling machine in rock and by a retaining wall, all as shown on drawing.

The river bank of said canal is to consist of an inner masonry wall, a concrete toe-wall a paved outer slope, and a filling of the waste material, all as shown on drawing. All material for said bank is to be taken from the canal prism. The bank is to extend to high water limit with dam, or six feet above crest, and the filling is to be crowned on top for an additional foot.

The roadway is to be graded along shore from Sonora Point to Cheney creek to the level of the top of the river bank and surplus material from the prism excavation is to be used for this purpose.

The right of way will cover the canal site and to the east limit of the roadway and generally be limited by the approximate location of the 520-foot contour at elevation 16.25 on Nashville gauge.

The canal entrance will be 350 feet wide and crossed by a light highway bridge in three spans carried on heavy piers and abutments, and the design at this point shall be such as to facilitate the placing of a caisson or coffer-dam in case it should be desired to unwater the canal.

The leading channel from deep water in the river to the canal entrance is to be excavated to canal grade, and is to converge from a width of 800 feet above Sonora Point to 370 feet at entrance.

A bear trap 100 feet long, is to be located near the outer angle of the basin, the crest of which when down shall be at level of zero of Nashville gauge, and when up at top of wall or sixteen feet above said zero. Overflow weirs with flashboards and sluices, shall be constructed if required.

Masonry flumes, carrying the road bridges shall be provided for the outlet of streams that enter the canal, said flumes to be provided with stop logs over which the water tumbles. The backwater basin above any flume will constitute a place of deposit for detritus which can be removed in low water.

The river dam is to be located across the river from the head of the power canal to the guard lock of the navigation canal at Nashville. It is to be 6,000 feet long and divided into length of 1,000 feet with intermediate piers above high water. The two lengths from the canal entrance to Sonora Point are located to the east of the low water channel so the same may be partially constructed as a wing-dam in advance of the main structure. The following three lengths are diagonally across the river and the last length is at right angles to the shore at the guard lock. The crest of dam is to be at elevation ten feet on Nashville gauge.

The prism of said dam is to be constructed of first-class concrete. The profile is to be of the curved type with rollway, the end of said rollway to be generally thirteen feet below the crest and twenty-four feet wide on base at said level, all as shown on plan.

The foundation of said dam is to be cut down to solid rock and all joints cleared and filled. It is to be cut down any additional depth required to give a least thickness of three feet of solid concrete under the rollway.

Below said dam for some distance the rock is to be removed to the level of the rollway when above said level or built up to same and faired off to the rock surface when below said level.

The guard lock of the navigation canal is to be raised to such height as shall be deemed necessary.

The tail-race is to be located from the power station near the outer angle of the basin to the vicinity of the bridge and in the vicinity of the bar shore the guard bank of said race to be fair with the bank of the basin and to continue same on fair line down stream.

The prism of said race is to have a bottom width of 400 feet, and said bottom to be at elevation ten feet below zero of Keokuk gauge with grade of one and one-half feet to power station.

The guard lock to be formed of the material from excavation, the larger blocks roughly arranged on outer face and top as a protection, said guard-bank to be built above extreme high water.

Progressive construction may be adopted in said tail-race provided the nature of the material be such as to permit of its excavation under way by suitable machinery, and the tail-race with half width may thus be developed in connection with the wing-dam proposition if so desired.

The closing wall of basin is treated as part of the installation herein-after presented.

This study confirms previous study of large enterprises—that the most comprehensive and boldest treatment is most effective and economical. Nature has fashioned the situation on so large a scale and so completely, as to leave little opportunity for partial development. No island, no chute, no configuration of river bed or trick of foreshore, divides the problem and invites a limited treatment complete in itself and that can be merged into a larger solution.

Treated broadly, however, and on the basis of a considerable initiation installation, it is feasible to produce at moderate cost one of the greatest of water-power developments. It is probable that final data and study can mature a project that will not cost over \$35,000 per horse-power for primary work, or about \$2.00 per year, and about the same for plant, or \$5.00 per year; say a total of \$7.00 per horse-power year of 5,000 hours delivered to large consumers and to sub-stations anywhere within a radius of forty to fifty miles, at the time of full development and use. On the basis of one-third development the equivalent charge would be \$11.00.

A dam at the foot of the rapids is not only most effective from the water-power standpoint, but has positive advantages for navigation, over the dam at Nashville. A single lock will be less costly to maintain and operate than the present canal and it will facilitate navigation. The pool above the dam will constitute a radical improvement of the stream for navigation for thirty miles or more, one step in such improvement as the future may, and should demand. Present projects for river improvement will be cheapened. The project properly worked out, is not one for any intrinsic objection; water-power development is to be encouraged by sound public policy and the contribution to navigation, present and future, would well justify the Federal Government in providing for navigation features, if no more.

The important function of the pond in conserving the low water volume for the daily variation in demand in an ultimate development is a reason for the dam in addition to the head of water and navigation.

The remarkable results which electricians are now prepared to guarantee make feasible the transmission of power to long distances. The cheapness with which power can be produced by a proper project would probably justify commercial transmission to a distance of one hundred miles.

In the appendix is given the population within a radius of forty miles. In the early development a power line would probably be taken down the Missouri shore to Quincy and Hannibal, supplying towns enroute directly or by short side lines. A similar line can be carried up the Iowa shore to Fort Madison and Burlington and extended to Galesburg by Monmouth. A third line could go eastward by a number of considerable towns to Pekin and Peoria. To supply the local demand within the radius of a few miles is comparatively simple.

The direct use of power from the wheel can be made for some purposes and a location at the power site is then advantageous. Plans using a large number of small units or long trains of shafting, are costly and wasteful, and can be better served by wiring and individual motors and these can be located anywhere within the limits of transmission at ordinary voltage. As a general proposition power will be cheapest in the locality where produced and large users will be disposed to establish new industries in the vicinity of the power site.

There is no reason why cheap water-power, such as can be had by proper treatment of the Des Moines rapids, should not produce a great industrial development. Keokuk is on a navigable stream and is well served by railway and can readily grow to a trunk line point; it is in the pro-

ductive heart of the great interior and at the middle of the corn belt; timber from the north, cotton and timber from the south and all the products of a great agricultural region can assemble here; it is the center of a great home market and the climate is good. It can mill grain as well as Minneapolis and St. Louis, make whisky as well as Peoria, make paper as well as on Rock river, spin cotton with New England, and do a thousand things better than at Niagara or Messina, which are less favorable to market.

If the statement be accepted that water power towns contain from three to five people for each developed horse-power and that the wealth of such a community is a thousand per capita, then the public policy of such enterprises becomes profoundly significant and they should excite the solicitude of the state. From this viewpoint the question is one of cheap power rather than large dividends from the direct investment.

Keokuk can rely more safely than some other points that have attracted large capital, on the theory that the power produced will make its own market.

Next in importance is the water power at Keosauqua at the great bend of the Des Moines river.

This bend extends a distance of twelve miles around, while at the beginning of the bend it is only two miles across, giving a natural fall in the river of thirty feet.

The water power on the great bend would have been developed in the first settlement of the country, some sixty years ago, when water was considered the paramount power, but for the fact that power rights were secured by parties who would not fully develop the water power, nor would they allow any one else to do so; now the rights to the power are such that there is nothing in the way to their development except money and enterprise.

The Des Moines river at this point at the time of the lowest water is 550 feet wide, with an average depth of eighteen inches, and at the extreme high water the rise of the river is only eighteen feet.

The proposition would be to cut a canal across the bend of the river, a distance of two miles, the greatest depth of which would be sixty-four feet for only a short distance, with an average depth of thirty-five feet, and with a dam across the river (which we are informed by the engineers will be necessary), of a height of ten feet, which would give a fall of forty feet, with a full flow of the river in time of low water.

The riparian rights from the land holders around the bend have been secured and the right of way for the canal can be had without

any excessive demands; all of which are held in escrow, along with the plans for the canal, the dam and the power plant complete, which were prepared by a competent engineer after the surveys had been carefully made.

The water power could be used for the propulsion of electric railways, since the power can be transmitted under the improved methods of transmission, and without perceptible loss to a distance of 200 miles.

Besides, conditions about Keosauqua are peculiarly well adapted to manufacturing; there is plenty of available stone of a superior quality and the configuration of the country is such that, together with the river drainage, makes it a desirable manufacturing point.

There is some talk of building an interurban railway line from Fairfield by way of Keosauqua to Memphis, Mo. Also another interurban railway line from Burlington to Keosauqua is proposed. In both of these proposed lines it is the purpose of the promoters to use the water power at Keosauqua for the manufacture of electricity for their propulsion.

It is only a question of time until the country will have a number of interurban railway lines, which will be built standard gauge, and will not only be used for traffic, but will carry freight and act as feeders for the main lines of steam railway, using the regular freight cars.

The remaining number of water powers that have been herein mentioned are exceedingly valuable in that they are capable of generating immense electrical power that can now be transmitted by modern methods until it is safe to assert that an abundance of power can be derived from that source for any possible requirement in any part of Iowa.

TRADE UNIONS IN IOWA.

The chapter devoted to trade unions in this report consists of a chart, four tables, and a running summary of "Advantages gained by trade unions in Iowa without strikes," and a part devoted to copies of agreements made by various unions with employers.

Table No. 1 is a detailed compilation of reports from the separate local organizations showing the year when each was organized and the numbers of members in each, the length of work day before and since organization, the minimum rate of wages paid per day (whenever that method could be consistently stated) and the highest rate paid per day to the most efficient workmen both before and since organization.

The actual wage gain per hour is exhibited where the data furnished would permit of such tabulation.

This plan was considered necessary in order to clearly show the pecuniary advantages gained, especially where it related to cases where hours were reduced and the day rate paid remained stationary, which virtually amounts to an increase and was considered an essential feature worthy of special mention.

For illustration, where the rate of pay previous to organization was \$2.25 per day of ten hours or an equivalent of twenty-two and one-half cents an hour and the hours were reduced to nine per day without reducing the day rate of wages the hourly rate was virtually increased to twenty-five cents or two and one-half cents an hour, this method has been followed throughout Table No. 1 both for the minimum and highest rates paid wherever it was possible to tabulate from the returns secured.

The inquiries were framed with a view of ascertaining what variation existed in the rates of wages among the several crafts which was due to superior skill and ability and wherever such a

variation was shown to exist—before organization—and what the influence of trade unions has been to change such previous ratios and establish for the trade a “dead level remuneration.” The questions were therefore put as follows: 6. Maximum hours for a day’s work before organization..... Maximum hours for a day’s work since organization..... 7. Minimum rate of wages before organization..... Minimum rate of wages since organization..... 8. Maximum earnings of the most skilled before organization..... Maximum earnings of the most skilled since organization..... By making the inquiries in this manner it was broad enough to make it possible to avoid many technicalities common to various occupations and our correspondents had the privilege of stating in their own way the basis on which they worked and how they were paid and the Bureau was supplied with the necessary information to enable us to compile the table uniformly, the results are sufficiently clear to establish actual facts as to whether the percentages of variation have been maintained or whether a variation has been established from the rate paid the minimum to that paid the most skilled and efficient both before and since organization, the amounts are definitely stated for each local union in the parallel columns under head of, “Wage gains per hour since organization,” Table No. 1.

The expense of organization is also give under head, “Per capita dues per month.” The benefits paid to sick and disabled members together with the funeral benefits paid during the past year is also stated as reported and amounts to \$39,129 for sickness and disability and \$12,758 for funeral benefits.

The growth of the organizations that are still in existence in Iowa cover a period of forty-five years dated from 1858 and is displayed by chart at the end of this introduction showing the proportionate number that were organized each year.

It was also considered advisable to date the receipt of return of schedules in order to establish a record of prevailing conditions at the time report was received.

Table No. 2 is a summary of the whole, showing 830 local unions in the state reported as holding charters, this is an increase over the number reported for the year 1900, of 434 or 109.60 per cent. The number of national and international organizations

having representation in the state is now reported as sixty-five or an increase over the number reported in 1900 of seventeen or 35.42 per cent; reports were received from 762 out of the 830 locals giving a total membership of 44,722 or an increase over the number reported in 1900 of 18,654 or 71.56 per cent. The average membership for each local is 56.68, an estimate on the same basis for the sixty-eight delinquent locals not reporting would place the total membership in the state at 48,712. (The eleven local organizations of the national association of stationary engineers are not included in this summary of totals.)

Table No. 2 also averages for the state all the items recorded in Table No. 1 relative to hours and wages, showing the average percentage of reduction of hours and increase of wages since organization for each craft separately. Such increase of wages is based on minimum rates only.

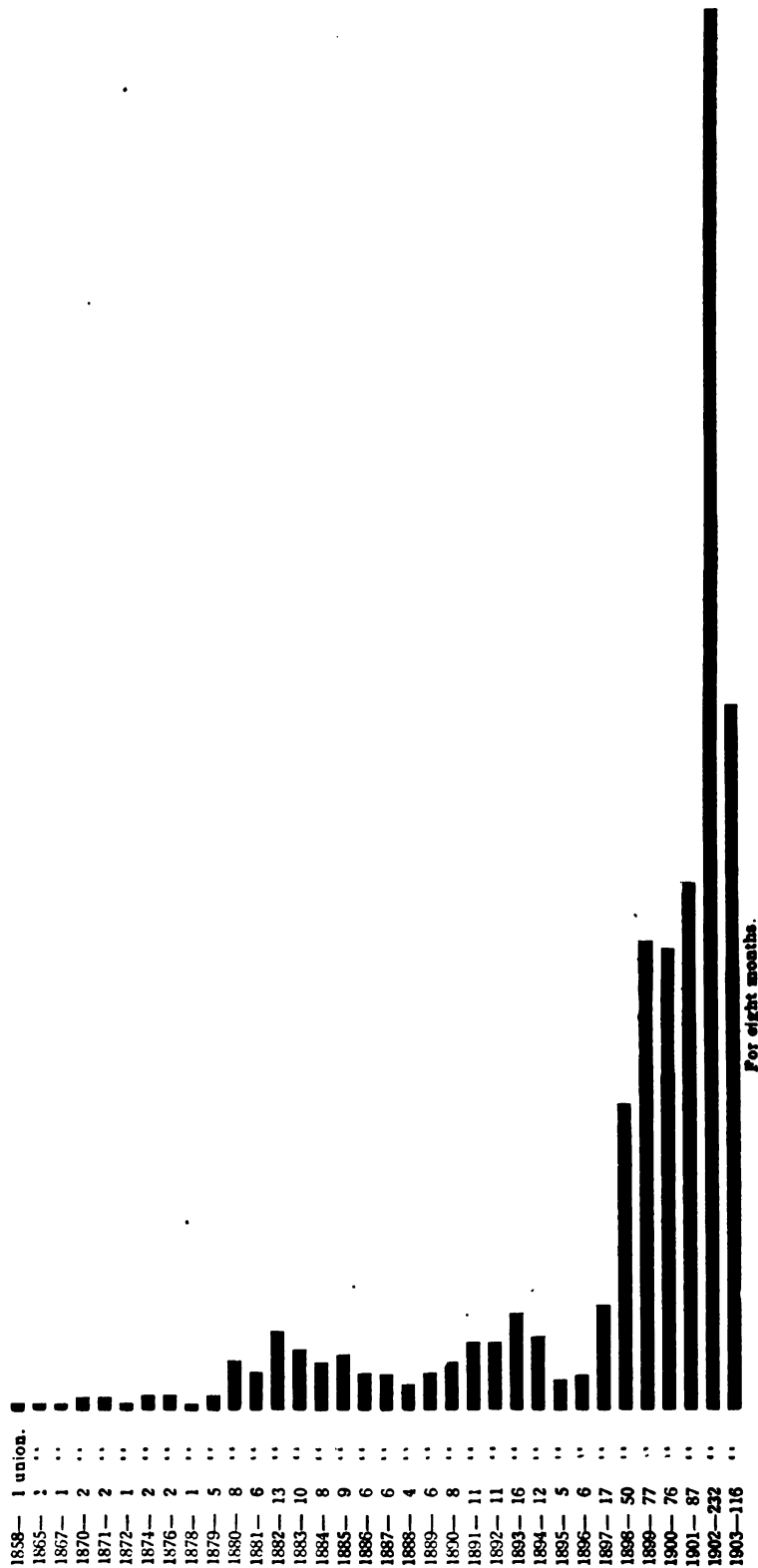
Table No. 2 discloses the members of trade unions to be distributed among the grand divisions of trade and industry as follows:

Building trades	5,692 members.
Domestic and personal service.....	2,446 members.
Manufactures	11,138 members.
Mercantile	3,087 members.
Mines and mining.....	12,499 members.
Transportation	9,860 members.

Total	44,722 members.
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Tables Nos. 3 and 4 are summaries by localities and counties showing the number of organizations and membership in 123 localities and fifty-three counties of the state.

CHART SHOWING THE PROPORTIONATE GROWTH OF TRADE UNIONS IN IOWA THAT ARE STILL IN EXISTENCE,
AND SHOWING IN WHAT YEAR THEY WERE ORGANIZED.



COPY OF LETTER AND SCHEDULE TO TRADES UNIONS.

DES MOINES.

To the Secretaries of Labor Organizations in Iowa:

LADIES OR GENTLEMEN—The Commissioner of the Bureau of Labor Statistics is directed by law "to collect, systematize and present in his biennial reports statistical details relating to all departments of labor in the state, especially its relations to the commercial, social and educational conditions of the laboring classes."

The trade unions of Iowa will be given a special chapter in the forthcoming report as in the last. Secretaries or statisticians of the local organizations are requested to kindly fill out this blank as completely as possible as it applies to the craft reporting.

Add under "Remarks" what suggestions the members of the organization consider of advantage to the people, in reference to proposed investigations or necessary legislation.

No names of persons supplying information will be published under any circumstances.

Yours truly,

EDWARD D. BRIGHAM, Commissioner.

BLANK.

1. Name of organization.....No. of local.....2. Location, city.....county.....3. When organized.....day of.....year.....4. Number of members.....Monthly dues per member.....5. Number of assessments levied during year.....State for what purpose.....Total amount of assessments collected \$.....Amount per capita \$.....6. Maximum hours for a day's work before organization.....Maximum hours for a day's work since organization.....7. Minimum rate of wages before organization.....Minimum rate of wages since organization.....8. Maximum earnings of the most skilled before organization.....Maximum earnings of the most skilled since organization.....9. State the rate of wages paid those unorganized in your craft in your locality.....Do you insist on union members only being employed in your craft.....
10. Does your organization make annual agreements with your employers regulating hours, wages, and conditions.....Send copy if you do.....11. Does your union resort to strikes to settle disputes.....12. How many strikes have you had since December 31, 1900.....(Give details on enclosed strike blank. If more than one strike has occurred send to Bureau for more strike blanks).
13. Total amount of sick benefits paid by union during last twelve months \$.....14. Total amount of funeral benefits paid during last twelve months \$.....15. What amount of financial relief or assistance has your organization afforded its members, other than sick and funeral benefits during the last twelve months \$.....16. Does your organization encourage the discussion of technical and economic subjects during meetings.....Do

you give lectures.....Or engage lecturers.....Has your local a library.....17. How many employed in your locality at your craft? Union.....Non-union.....18. If in the 'railroad service, are double-header trains operated.....19. Are they more dangerous than single-header trains.....20. What loss of life has resulted from double-header trains from your lodge or division.....21. What benefits have been secured for your craft through the local organization without resorting to strikes.....22. What special line of inquiry not included in this schedule would be of advantage to your craft.....

TRADE UNIONS IN

Showing date of organization, number of members, hours worked per day
hour since

BAKERS AND CONFECTIONERS,

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.		
				Before organization.	Since organization.	Before organization.	Since organization.	
1	Burlington	184	1901	40	12-14	10	\$ 1.83	\$ 1.66
2	Cedar Rapids ..	210	1902	6	12	12	1.30	1.80
3	Davenport.....	808	1908	85	12-14	10	n	n
4	Des Moines	188	1901	44	12	11	2.00	2.66
5	Dubuque	802	1908	80	12-14	10	n	n
6	Keokuk	228	1902	14	14	11	1.66	1.66
7	Ottumwa	140	1901	25	12-14	10	n	n
8	Sioux City.....	240	1902	35	12	12	2 00	2.00

n Not reported.

BARBERS UNION,

9	Boone	281	1901	20	b 11	b 11	n	n
10	Burlington	110	1898	22	n	n	n	n
11	Cedar Rapids	97	1897	58	n	n	n	n
12	Centerville	889	1902	17	n	n	n	n
13	Creston	490	1908	14	12	12	\$ 1.50	\$ 2.00
14	Clinton	236	1900	25	12	11	1.50	1.66
15	Council Bluffs	321	1901	36	15	13	1.38	1.66
16	Davenport	116	1898	44	n	n	n	n
17	Des Moines	48	1899	76	14	11½	1.00	1.50
18	Dubuque	429	1902	40	12	12	1.25	1.66
19	Fairfield	368	1902	7	n	n	n	n
20	Keokuk	214	1901	19	14	13	...	2.00
21	Fort Dodge	504	1908	30	12	12	1.50	2.00
22	Fort Madison	287	1902	12	11	11	1.00	1.33
23	Marshalltown	423	1902	21	12	11	1.50	2.00
24	Oskaloosa	19	1899	27	11	11	1.33	1.80
25	Ottumwa	183	1899	25	12	11	.....	2.00
26	Sioux City	52	1899	50	18	12	n	n
27	Waterloo	414	1902	15	n	n	n	n
28	Muscatine	849	1901	17	15	15	n	n

b Barbers are employed on Saturdays 16 hours. The wages quoted are the average week for the employer, this makes their wages vary according to the amount of business.

*BLACKSMITHS, INTER

29	Boone	a 28	1902	18	10	10	\$ 1.75	\$ 2.75
30	Cedar Rapids	182	1901	12	10	10	2.50	2.75
31	Clinton	16	1902	40	10	10	2.10	2.40
32	Davenport	101	1895	40	10	10	2.00	2.30
33	Des Moines	184	1901	21	10	9	2.00	2.25
34	Dubuque	95	1902	25	10	10	1.50	2.00
35	Fort Madison	53	1902	18	10	10	2.25	...
36	Keokuk	249	1903	15	10	10	.....	2.00
37	Marshalltown	86	1902	30	10	10	1.90	2.60
38	Mason City	266	1903	13	10	10	2.00	2.00
39	Missouri Valley	39	1902	10	10	10	2.50	3.00
40	Oelwein	220	1901	18	10	10	2.60	3.00
41	Ottumwa	162	1900	17	10	9	1 25	1.75
42	Sioux City	36	1902	18	10	10	2.00	2.50
43	Waterloo	65	1902	15	10	10	2.00	2.70
44	What Cheer	b 259	1903	17	10	9	2.50	2.50

* The Brotherhood of Blacksmiths take their helpers in the same organization.
cents an hour. b Helpers wages before organization, 12½ and 15 cents an hour,

IOWA—TABLE No. 1.

before and since organization, and wage rates per day with actual gain per organization.

INTERNATIONAL JOURNEYMEN

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
.....	.....	5 c.	.....	60c.	.....	.....	8- 4-08	1
\$ 2 50	\$ 2 50	none	none	60c.	.....	.....	7- 3-02	2
n	n	n	n	60c.	.....	.....	8- 4-08	3
2 50	2 83	7½c.	4½c.	60c.	.....	.....	7- 2-02	4
2 50	2 50	n	n	60c.	.....	.....	8- 4-08	5
n	n	8½c.	4½c.	60c.	.....	.....	8-18-08	6
8 88	8 88	none	none	60c.	.....	.....	8- 4-08	7
				60c.	.....	.....	8-20-08	8

INTERNATIONAL JOURNEYMEN

n	n	a	a	60c.	.....	.....	8-28-08	9
n	n	a	a	n	.....	.....	5-16-08	10
n	n	a	a	n	.....	.....	5-16-08	11
n	n	a	a	60c.	.....	.....	4-14-08	12
n	n	a	a	60c.	.....	.....	3-19-08	13
2 20	2 20	a	a	60c.	\$ 30.00	.....	8- 4-02	14
1 66	2 33	a	a	60c.	.....	.....	11-12-02	15
n	n	a	a	n	.....	.....	5-16-08	16
1 66	2 66	a	a	\$1.00	100.00	.....	2-15-08	17
2 00	2 00	a	a	60c.	.....	.....	12- 4-02	18
n	n	a	a	n	.....	.....	5-16-08	19
.....	2 00	a	a	60c.	80 00	.....	2- 5-08	20
2 50	2 50	a	a	60c.	.....	.....	4-18-08	21
2 25	2 50	a	a	60c.	.....	.....	4-14-08	22
2 50	2 50	n	a	60c.	.....	.....	11- 7-02	23
.....	2 50	a	a	60c.	45.00	\$ 60.00	4- 2-03	24
.....	n	a	a	60c.	.....	.....	3-18-08	25
n	n	a	a	60c.	25.00	.....	7-18-08	26
n	n	a	a	n	.....	.....	5-16-08	27
.....	.....	a	a	60c.	.....	.....	1-18-08	28

earnings. a Barbers usually get 60 per cent on all money they earn over \$20.00 per n Not reported.

NATIONAL BROTHERHOOD OF

2 75	3 20	10 c.	4½c.	50c.	.....	.....	8-27-08	29
3 00	3 25	2½c.	2½c.	50c.	.....	.....	12-16-02	30
2 80	3 20	3 c.	4 c.	50c.	14.00	.....	6-24-08	31
3 00	3 50	8 c.	5 c.	5½c.	118.00	.....	7-14-08	32
4 15	4 75	5 c.	11½c.	50c.	.....	.....	6-27-08	33
3 00	3 80	5 c.	3 c.	50c.	.....	.....	4- 1-03	34
.....	3 10	.....	.....	50c.	.....	.....	7- 5-02	35
.....	.....	.....	.....	50c.	.....	.....	6-17-08	36
2 65	3 80	7 c.	7 c.	50c.	.....	.....	3-24-08	37
2 50	2 50	.....	.....	50c.	.....	.....	7- 15-03	38
3 00	3 20	5 c.	2 c.	50c.	.....	.....	2-25-08	39
3 00	3 85	4 c.	3½c.	75c.	10.00	\$ 40 00	4- 5-08	40
2 00	3 00	6½c.	13½c.	50c.	.....	.....	6-20-02	41
2 85	3 25	5 c.	4 c.	50c.	.....	.....	6-18-08	42
2 85	3 15	7 c.	8 c.	50c.	.....	.....	7- 2-02	43
2 50	2 60	2½ c.	2½ c.	60c.	.....	.....	6-19-08	44

a Helpers wages before organization, 14 and 15 cents an hour, since 15 and 17½ since 16½ and 19½ cents an hour.

TRADE UNIONS IN IOWA— BOILER MAKERS AND IRON SHIP

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
45	Boone 161	1895	83	10	10	\$ 2.75	\$ 3.20
46	Boone a 18	1902	30	10	10	1.40	1.50
47	Cedar Rapids 144	1901	26	10	10	2.50	3.30
48	Clinton 129	1902	18	10	10	2.40	3.20
49	Des Moines 47	1892	28	10	10-9	2.00	2.50
50	Dubuque 15	1902	56	10	10	2.90	2.90
51	Marshalltown 149	1902	12	10	10	2.75	3.00
52	Missouri Valley 145	1902	18	10	10	2.75	3.00
53	Oelwein 212	1899	52	10	10	2.75	3.25
54	Oelwein a 32	1902	37	10	10	1.90	1.85
55	Sioux City 244	1900	20	10	10	2.75	3.25
56	Waterloo 133	1902	19	10	10	2.40	3.15

a Boiler makers, helpers, locals.

BOOK BINDERS, INTERNATIONAL

57	Cedar Rapids 84	1899	18	10	9	1.50	2.00
58	Davenport 98	1900	13	10	9	1.50	2.00
59	Davenport a 98	1901	26	10	9	1.50	.55
60	Des Moines 71	1898	29	10	9	1.00	2.00
61	Des Moines a 88	1900	53	10	9	1.50	1.00
62	Dubuque 116	1902	10	10	9	1.80	2.38
63	Sioux City 78	1902	12	10	9	2.00	2.00

a Females' organization technically termed "Bindery Girls."

BOOT AND SHOE

64	Council Bluffs.....	354	1903	10	10	10	n	n
65	Dubuque.....	137	1902	56	10	10	1.00	n
66	Keokuk.....	303	1903	240	10	10	n	n
67	Sioux City.....		1903	35	10	10	n	n
68	Waterloo.....	337	1902	9	10	10	n	n

n Not reported.

BREWERY WORKMEN, INTER

69	Burlington 243	1901	29	a 10	10	a	2.00
70	Cedar Rapids 316	1902	25	c 10	10	a	2.00
71	Clinton 314	1902	23	c 10	10	a	2.00
72	Davenport 98	1892	35	c 14	9	1.80	2.50
73	Dubuque 323	1903	70	c	10	1.60	2.60
74	Sioux City 173	1899	20	c	10	a	2.00

a Not reported. b Data furnished too irregular to permit of tabulation. that it often exceeded that amount, sometimes as high as 18 hours and no allowance was

BRICKLAYERS AND STONEMASONS,

75	Boone b & p 11	1901	17	10	9	3.50	4.05
76	Burlington s m ...	1902	23	10	9	2.75	3.00
77	Burlington b 10	1892	52	10	9	3.50	4.05
78	Cedar Rapids b 1	1900	29	10	9	2.50	4.50
79	Cedar Rapids s m 14	1901	72	10	9	2.25	3.00
80	Clinton b m & p 15	1899	23	10	8	4.00	4.40
81	Council Bluffs b 6	1899	23	10	8	4.00	4.40
82	Centerville b m & p 13	1902	12	10	9	3.00	4.05
83	Des Moines b 2	1892	90	10	8	1.25	4.50
84	Des Moines s m 22	1903	23	10	8	2.00	3.00
85	Dubuque b 17	1902	33	10	9	3.50	4.50
86	Fairfield b m & p 16	1902	18	10	9	4.00	4.50
87	Fort Dodge b & m 20	1903	25	10	9	3.00	4.50

TABLE No. 1—CONTINUED.

BUILDERS OF AMERICA, BROTHERHOOD OF

Day wage of Most Skilled..		Wage Gain Per Hour Since Organization.		Per capita dues. per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 2.90	\$ 3.40	4½c.	5 c	75c.	.....	\$ 125.00	8-26-08	45
1 70	2.25	1 c.	5½c.	50c.	.....	.....	8-27-08	46
2 80	3.80	7 c.	5 c.	50c.	.....	.....	7-10-08	47
.....	.....	8 c.	.....	50c.	.....	.....	8- 8-08	48
2.50	3.00	5 c.	5 c.	50c.	.....	40.00	6-27-08	49
2.90	3.00	.....	1 c.	50c.	\$ 14.00	.....	7- 1-02	50
2.95	3.25	2½c.	3 c.	50c.	.....	.....	10- 2-02	51
3.00	3.25	2½c.	2½c.	50c.	.....	.....	8- 2-08	52
3.00	3.40	5 c.	4 c.	5 c.	.....	.....	3-26-08	53
.....	.....	½c.	.....	50c.	.....	.....	8- 3-08	54
2 90	3.25	5 c.	8½c.	50c.	.....	.....	6-10-08	55
.....	.....	7½c.	.....	50c.	.....	.....	8- 3-08	56

BROTHERHOOD OF

3.00	3.33	7½c.	7 c.	50 c.	.....	.....	6-30-02	57
2.00	3.00	7½c.	19½c.	33½c.	.....	.....	12-22-02	58
1.25	1.25	2 c.	1½c.	18½c.	.....	.....	12-22-02	59
3.00	3.66	12½c.	10½c.	60 c.	5.00	.....	6-30-02	60
1.00	1.25	6 c.	4 c.	35 c.	.....	.....	12-16-02	61
2.50	2.75	8 c.	8½c.	50 c.	.....	50.00	6- 6-08	62
3.00	3.33	2½c.	7 c.	50 c.	.....	.....	1-20-08	63

WORKERS UNION.

n	n	.....	.....	\$ n	n	n	7-20-08	64
2.50	n	.....	.....	1.00	25.00	n	6-23-08	65
n	n	.....	.....	1.00	.....	.....	6-23-08	66
n	n	.....	.....	1.00	.....	.....	6-23-08	67
n	n	.....	.....	1.00	.....	.....	7-21-08	68

NATIONAL UNION OF UNITED

a	2.50	b	b	50c.	.....	.....	6- 9-08	69
a	2.50	b	b	50c.	.....	.....	6- 9-08	70
a	2.50	b	b	50c.	.....	.....	6- 9 08	71
2.50	3.33	b	b	50c.	40.00	.....	5-20-08	72
a	2.80	b	b	50c.	.....	.....	4-28-08	73
a	2.50	b	b	50c.	.....	.....	7-20-08	74

c Brewers report 10 hours was considered a day's work previous to organization but made for overtime. Time and half rates for overtime is now paid, since organization.

INTERNATIONAL UNION OF AMERICA

3.50	5.40	10 c.	25 c.	50 c.	.....	.....	3-26-08	75
3.00	3.60	12½c.	10 c.	33½c.	.....	.....	2-21-08	76
3.60	4.50	10 c.	14 c.	25 c.	.....	.....	6-22-08	77
3.50	6.00	25 c.	29½c.	50 c.	45.00	.....	7-23-08	78
3.00	3.60	17½c.	10 c.	50 c.	90.00	.....	7- 7-02	79
4.00	4.40	15 c.	15 c.	50 c.	.....	.....	6-17 02	80
4.00	4.40	15 c.	15 c.	50 c.	.....	.....	6-17-02	81
3.00	4.05	15 c.	15 c.	50 c.	.....	.....	7 20-03	82
.....	4.90	43½c.	.....	50 c.	680.00	.....	6-15-03	83
4.00	4.20	25 c.	12½c.	50 c.	200.00	.....	6-23-08	84
4.00	4.05	15 c.	5 c.	50 c.	.....	.....	7- 2-02	85
4.00	4.50	10 c.	10 c.	25 c.	.....	.....	7- 2-02	86
4.00	4.50	20 c.	10 c.	50 c.	.....	.....	4- 7-03	87

**TRADE UNIONS IN IOWA—
BRICKLAYERS AND STONEMASONS,**

Marginal number.	Location and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.		
				Before organization.	Since organization.	Before organization.	Since organization.	
88	Iowa City..... b	18	1902	26	10	9	\$ 2.50	\$ 3.00
89	Marshalltown..... b & m	12	1902	51	10	9	2.50	3.60
90	Mason City..... b & m	21	1903	41	10	9	4.00	4.50
91	Muscatine..... b	7	1900	14	10	9	2.00	4.05
92	Oskaloosa..... b & m	23	1903	14	10	9	4.05	4.05
93	Ottumwa..... s m	8	1898	14	10	8	2.50	3.20
94	Ottumwa..... b	9	1891	21	10	9	3.50	4.50
95	Sioux City..... b	5	1890	46	10	9	3.50	4.95
96	Waterloo..... b & m	19	1902	28	10	n	n	n
b Bricklayers.		s m	Stonemasons	b & m		Bricklayers and masons.		

b Bricklayers.

s m Stonemasons

b & m Bricklayers and masons.

BRICK, TILE AND TERRA COTTA

97	Boone.....	84	1902	100	10	9	1.25	1.80
98	Des Moines.....	51	1901	380	10	9	1.35	1.80
99	Lehigh.....	53	1901	67	10	9	1.45	1.65
100	Mason City.....	88	1903	28	10	10	1.75	1.90
101	Ottumwa.....	119	1903	53	10	9	1.50	1.50

BROOM MAKERS

102	Burlington.....	41	1899	11	10	10	n	n
103	Cedar Rapids.....	27	1902	8	10	10	n	n
104	Des Moines.....	11	1900	12	10	10	n	n
105	Dubuque.....	42	1899	10	10	10	n	n
106	Sioux City.....	42	1899	6	10	9	1.70	2.00
107	Waterloo.....	93	1902	8	10	10	n	n

n Not reported.

CARMEN, BROTHER

108	Boone.....	193	1902	30	10	10	1.40	1.50
109	Belle Plaine.....	269	1903	20	10	10	n	n
110	Cedar Rapids.....	1	1888	151	10	10	1.25	1.65
111	Centerville.....	283	1903	21	10	10	n	n
112	Council Bluffs.....	93	1901	38	10	10	n	n
113	Davenport.....	273	1903	82	10	10	n	n
114	Des Moines.....	119	1901	26	10	10	n	n
115	Dubuque.....	275	1903	260	10	10	n	n
116	Eagle Grove.....	24	1901	12	10	10	n	n
117	Fort Dodge.....	107	1901	18	10	10	n	n
118	Fort Madison.....	210	1902	130	10	10	1.25	1.60
119	Marshalltown.....	110	1901	89	10	10	1.40	1.50
120	Missouri Valley.....	97	1901	24	10	10	1.40	1.40
121	Mason City.....	282	1903	18	10	10	n	n
122	Oelwein.....	3	1900	102	10	10	n	n
123	Ottumwa.....	51	1901	16	10	10	n	n
124	Sioux City.....	266	1903	23	10	10	n	n

n Not reported.

CAR WORKERS, INTERNA

125	Clinton.....	82	1902	n	n	n	n	n
126	Dubuque.....	45	1902	290	10	10	1.25	1.40
127	Waterloo.....	...	1902	65	10	10	1.40	1.70

n Not reported.

TABLE No. 1—CONTINUED.

INTERNATIONAL UNION OF AMERICA—CONTINUED.

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported.	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 4.00	\$ 5.00	8½c.	15½c.	25 c.	.....	.....	8-22-02	88
8.50	4.95	15 c.	20 c.	50 c.	.....	.....	8—08	89
4.50	5.40	10 c.	15 c.	50 c.	.....	.....	6-21-08	90
.....	.....	25 c.	.....	25 c.	.....	.....	7- 7-02	91
4.50	4.50	4½c.	5 c.	50 c.	.....	.....	7- 8-08	92
8.00	8.20	15 c.	10 c.	50 c.	.....	.....	9-30-03	93
4.50	6.50	15 c.	16 c.	50 c.	\$ 90.00	.....	1-15-08	94
8.50	4.95	20 c.	20 c.	50 c.	50.00	.....	6-18-03	95
n	n	.....	.....	.....	.....	.....	8-12-03	96

b m & p Bricklayers, stonemasons and plasterers.

n Not reported.

WORKERS, INTERNATIONAL ALLIANCE

2.00	2.50	7½c	7¾c	80c	10.00	.....	4-30-08	97
2.00	2.70	6½c	10 c	25c	300.00	55 00	2-23-08	98
.....	.....	8½c	.....	25c	.....	.....	6-11-08	99
2.00	2.25	1½c	2¼c	40c	.....	.....	6-22-08	100
2.25	2.25	1½c	2¼c	50c	.....	.....	4-12-08	101

INTERNATIONAL UNION.

n	2.00	.....	.....	50c	.....	.....	7-28-08	102
n	1.80	.....	.....	50c	.....	.....	7-28-08	103
n	2 10	.....	.....	50c	.....	.....	7-28-08	104
n	2.00	.....	.....	80c	.....	.....	6-14-08	105
1 70	2.00	5¼c	5¼c	50c	18.00	.....	12-31-02	106
n	1.80	.....	.....	50c	.....	.....	6-24-08	107

HOOD OF RAILWAY

1.60	1.70	1 c	1 c	40c	.....	.....	3-28-03	108
n	n	.....	.....	n	n	n	6-16-08	109
2.25	2.65	4 c	4 c	80c	200.00	190.00	6-16-08	110
n	n	.....	.....	n	n	n	6-16-08	111
n	n	.....	.....	n	n	n	6-16-08	112
n	n	.....	.....	n	n	n	6-16-08	113
n	n	.....	.....	n	n	n	6-16-08	114
n	n	.....	.....	n	n	n	6-16-08	115
n	n	.....	.....	n	n	n	6-16-08	116
n	n	.....	.....	n	n	n	6-16-08	117
2.25	2 75	8½c	5 c	25c	.....	.....	4-14-03	118
2.40	2.65	1 c	2½c	25c	n	n	6-16-03	119
2.50	2.50	.....	.....	25c	.....	.....	11- 9-02	120
n	n	.....	.....	n	n	n	6-16-03	121
n	n	.....	.....	n	n	n	6-16-03	122
n	n	.....	.....	n	n	n	6-16-03	123
n	n	.....	.....	n	n	n	6-16-03	124

TIONAL ASSOCIATION OF

n	n	.....	.....	.....	.....	.....	.....	125
2 10	2 20	½c.	1 c.	25c.	15.00	.....	4-15-03	126
2 25	2.50	8 c.	2½c	25c.	.....	.....	4- 6-03	127

TRADE UNIONS IN IOWA—
CARRIAGE AND WAGON WORKERS,

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
128	Burlington.....	92	1902	n	10	n	n
129	Clinton.....	118	1902	n	10	n	n
130	Des Moines.....	90	1901	52	10	\$ 2.00	\$ 2.25
131	Marshalltown.....	93	1902	45	10	n	n

CARPENTERS AND JOINERS OF AMER-

132	Boone.....	315	1898	23	10	9	2.25	2.50
133	Burlington.....	534	1899	105	10	9	1.50	2.50
134	Cedar Rapids.....	308	1899	233	10	9	1.75	2.75
135	Centerville.....	597	1901	48	10	9	1.75	2.25
136	Chariton.....	1523	1903	27	10	10	1.75	2.00
137	Clinton.....	772	1901	90	10	9	1.75	2.25
138	Colfax.....	1142	1902	26	10	9	n	2.50
139	Council Bluffs.....	364	1899	65	10	8	1.75	2.00
140	Corydon.....	611	1902	85	10	10	1.75	2.25
141	Creston.....	634	1902	40	10	9	1.75	2.70
142	Davenport.....	584	1890	127	10	8	1.75	2.40
143	Davenport.....	1272	1902	74	9	8	2.25	2.40
144	Des Moines.....	1091	1898	525	10	8	1.75	2.00
145	Des Moines.....	425 ^a	1899	94	10	9	1.50	2.25
146	Dubuque.....	678	1890	164	10	9	1.75	2.50
147	Eldora.....	1579	1903	14	10	n	n	n
148	Fort Dodge.....	294	1899	153	10	9	1.25	2.25
149	Fort Madison.....	1648	1903	20	10	10	2.00	2.50
150	Hiteaman.....	514	1900	11	10	8	1.75	2.50
151	Iowa City.....	1290	1902	82	10	9	1.75	2.00
152	Keokuk.....	523	1901	25	10	10	2.00	2.50
153	Knoxville.....	1644	1903	10	10	n	n	n
154	Lehigh.....	1621	1903	10	10	n	n	n
155	Marshalltown.....	1112	1902	60	10	9	2.50	2.50
156	Marion.....	1171	1902	17	10	n	n	n
157	Mason City.....	1247	1902	119	10	n	2.00	n
158	Milton.....	1013	1903	10	10	n	n	n
159	Muscatine.....	1069	1902	70	10	10	1.50	1.75
160	Mystic.....	1213	1902	15	10	10	n	2.00
161	Newton.....	1116	1902	27	10	n	n	n
162	Oelwein.....	1508	1903	32	10	n	n	n
163	Oskaloosa.....	1034	1902	85	10	n	1.75	1.75
164	Ottumwa.....	707	1900	64	10	9	1.75	2.70
165	Red Oak.....	879	1901	14	10	n	n	2.75
166	Shenandoah.....	1543	1903	20	10	10	n	2.75
167	Sioux City.....	948	1901	200	10	9	1.75	2.50
168	Waterloo.....	552	1901	56	10	10	2.00	2.50

^a Mill men's union. The monthly dues for carpenters are 50 cents for journey times to command the minimum rate. n Not reported.

TABLE No. 1—CONTINUED.

INTERNATIONAL UNION OF

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported.	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
n	n			n				128
\$ 3.00	\$ 3.88	5 c.	7 c.	25c.	\$ 15.00		7-18-08	129
n	n			n				130
								131

ICA, UNITED BROTHERHOOD OF

2.50	3.15	5½c.	10 c.	70c.			6-17-08	132
2.25	3.15	18 c.	12½c.	50c.			1-29-08	133
2.25	3.00	18 c.	11 c.	50c.			6-17-08	134
2.25	2.50	7½c.	5½c.	50c.			6-17-08	135
2.25	2.50	2½c.	2½c.	50c.			6-17-08	136
2.25	2.50	7½c.	5½c.	50c.			6-17-08	137
				50c.			6-17-08	138
2.50	2.80	15 c.	10 c.	80c.			11-20-08	139
2.50	2.50	5 c.		50c.			10-11-02	140
2.25	3.00	12½c.	11 c.	50c.	12.00		8-19-08	141
2.25	3.00	1½c.	15 c.	50c.			6-17-08	142
	8.00	5 c.		50c.			6-17-08	143
2.25	3.88	15 c.	19½c.	50c.			7-29-08	144
2.50	3.15	10 c.	10 c.	50c.	43.00		8- 8-08	145
3.00	3.60	11 c.	10 c.	50c.			4- 8-08	146
n	n			n			6-17-08	147
2.00	3.00	12½c.	13½c.	20c.	25.00		7- 1-02	148
		5 c.		50c.			6-17-08	149
		18½c.		50c.			6-17-08	150
2.25	2.50	4½c.	3 c.	50c.			6-17-08	151
2.50	2.75	5 c.	2½c.	30c.	65.00		1-12-08	152
n	n			n	n	n	6-17-08	153
n	n			n	n	n	6-17-08	154
3.00	3.25	8 c.	6 c.	50c.	n	n	10-31-02	155
n	n			50c.	n	n	6-17-08	156
3.00	n			50c.	n	n	8- 4-08	157
n	n			n	n	n	6-17-08	158
2.25	2.75	2½c.	2½c.	50c.	n	n	2-21-08	159
n	n			50c.	n	n	3-17-08	160
n	n			n	n	n	6-17-08	161
n	n			n	n	n	6-17-08	162
2.50	3.00			50c.	10.00	n	4- 2-08	163
2.50	3.00	12½c.	8½c.	50c.	100.00	100.00	7-20-02	164
n	3.00			50c.	n	n	6-17-08	165
n	n			50c.	n	n	6-17-08	166
2.50	4.00	10½c.	19 c.	50c.	94.00	150.00	7-13-08	167
2.50	3.00	5 c.	5 c.	50c.			6-17-08	168

men and 30 cents for apprentices and members advanced in years who are unable at all

TRADE UNIONS IN IOWA

CIGAR MAKERS INTERNATIONAL

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
169	Burlington	1 72	1880	106	a	8	b
170	Cedar Rapids	464	1900	28	12	8	\$ 1.00
171	Council Bluffs	177	1892	40	12	8	1.50
172	Creston	828	1891	11	10	8	1.50
173	Davenport	2 172	1876	120	11	8	b
174	Des Moines	5 111	1880	120	12	8	b
175	Dubuque	88	1883	23	14	8	b
176	Fairfield	490	1901	10	10	8	1.35
177	Fort Madison	4 181	1887	35	a	8	1.00
178	Keokuk	60	1880	43	12	8	b
179	Lyons	239	1885	24	12	8	1.25
180	Marshalltown	495	1902	16	10	8	1.75
181	Mason City	270	1906	80	10	8	b
182	Mt. Pleasant	155	1881	8	10	8	b
183	Muscatine	120	1883	41	18	8	1.25
184	Oskaloosa	277	1886	57	a	8	1.00
185	Ottumwa	228	1896	20	10	8	b
186	Sioux City	150	1881	96	10	8	1 50
187	Waterloo	5 496	1902	24	a	8	b
188	West Union	454	1901	16	10	8	2.00

a Number of hours worked per day previous to organization reported as 'un being employed entirely on a piece work basis it is not possible to quote wage gains per an increase of wages ranging from 50 to 133 per cent since organization. d The weekly per month e The amounts quoted under 'sick benefits' include out of work and \$3.00 per 1,000 since. 2 \$3 50 per 1,000 before \$3.00 since. 3 \$4.00 per 1,000 before, \$8.00 per 1,000 before, \$3.00 to \$17.00 since.

CLERKS, POSTOFFICE, UNITED

189	Atlantic	289	1901	8	a	b	c
190	Cedar Falls	916	1902	4	a	b	d
191	Cedar Rapids	845	1902	14	a	b	c
192	Clinton	565	1901	8	a	b	c
193	Council Bluffs	869	1901	13	a	b	c
194	Des Moines	873	1902	41	11	8	c
195	Dubuque	191	1900	17	11	9 1/2	c
196	Fort Dodge	423	1900	7	11	8 1/2	c
197	Grinnell	926	1902	3	a	b	c
198	Iowa City	955	1902	7	a	b	c
199	Keokuk	792	1900	9	a	b	c
200	Marshalltown	891	1901	9	a	b	c
201	Mason City	880	1901	5	a	b	c
202	Mt. Pleasant	659	1902	3	12	10	c
203	Ottumwa	442	1900	7	12	10	c
204	Sioux City	812	1901	19	10	8 1/2	c
205	Waterloo	161	1902	11	11	8	c

a Irregular, from 10 to 18 hours per day. b In first-class offices 8 hours is an d \$800.00 per year in first-class offices, \$500.00 in second-class. e \$900.00 per year. n Not reported. o Impracticable to show wage gains per hour.

—TABLE No. 1.—CONTINUED.

UNION OF AMERICA.

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported.	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
<i>b</i>	\$ 3.83	<i>c</i>	<i>c</i>	<i>d</i> \$1.80	<i>e</i> \$404.00	.....	1-24-08	169
\$ 1.50	3.50	<i>c</i>	<i>c</i>	1.80	75.00	.....	6-27-03	170
2.00	3.50	<i>c</i>	<i>c</i>	1.80	515.00	\$ 50.00	11- 9-02	171
2.25	3.88	<i>c</i>	<i>c</i>	1.80	20.00	.....	8-19-03	172
1.80	3.60	<i>c</i>	<i>c</i>	1.80	197.00	140.00	5-17-03	173
2.00	3.60	<i>c</i>	<i>c</i>	1.80	357.00	.....	10-31-02	174
<i>b</i>	<i>b</i>	<i>c</i>	<i>c</i>	1.80	135.00	.....	7-21-02	175
2.00	3.33	<i>c</i>	<i>c</i>	1.80	77.00	.....	6-18-03	176
1.80	3.00	<i>c</i>	<i>c</i>	1.80	100.00	.....	4-14-08	177
<i>b</i>	8.00	<i>c</i>	<i>c</i>	1.80	.....	.....	9-22-03	178
2.00	2.68	<i>c</i>	<i>c</i>	1.80	45.00	.....	7-18-03	179
2.00	2.50	<i>c</i>	<i>c</i>	1.80	15.00	.....	7-28-03	180
2.40	2.80	<i>c</i>	<i>c</i>	1.80	.....	.....	6-22-08	181
<i>b</i>	2.50	<i>c</i>	<i>c</i>	1.80	.....	.....	7- 5-02	182
2.00	2.68	<i>c</i>	<i>c</i>	1.80	117.00	850.00	7-17-03	183
1.80	3.00	<i>c</i>	<i>c</i>	1.80	10.00	.....	4- 2-03	184
1.80	3.00	<i>c</i>	<i>c</i>	1.80	.....	.....	12-24-02	185
2.00	4.20	<i>c</i>	<i>c</i>	1.80	521.00	40.00	6-20-03	186
2.00	3.00	<i>c</i>	<i>c</i>	1.80	.....	.....	7-13-03	187
<i>b</i>	<i>b</i>	<i>c</i>	<i>c</i>	1.80	<i>b</i>	<i>b</i>	6-14-03	188

limited" and "as high as 18". *b* Not reported. *c* On account of cigarmakers hour; the table, however, displays a reduction of hours, ranging from 20 to 40 per cent and dues are 15, 20 and 30 cents, the majority pay 30 cents, so the amount is averaged at \$1.80 other assistance rendered. *i* Minimum prices \$5.00 per 1,000 before organization; \$8.00 since. *k* \$6.00 and \$7.00 per 1,000 before, \$8.00 and \$12.00 since. *l* \$6.00 to

NATIONAL ASSOCIATION OF

<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	189
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	190
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	191
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	192
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	193
<i>e</i>	<i>f</i>	<i>o</i>	<i>o</i>	10c.	.....	1-20-08	194
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	35c.	.....	4- 2-03	195
<i>g</i>	<i>h</i>	<i>o</i>	<i>o</i>	10c.	.....	6-30-02	196
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	197
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	198
<i>e</i>	<i>i</i>	<i>o</i>	<i>o</i>	80c.	.....	3-18-03	199
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	200
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	201
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	10c.	.....	6-11-03	202
<i>e</i>	<i>i</i>	<i>o</i>	<i>o</i>	10c.	.....	6-30-02	203
<i>n</i>	<i>n</i>	<i>o</i>	<i>o</i>	15c.	.....	8-15-02	204
<i>h</i>	<i>h</i>	<i>o</i>	<i>o</i>	25c.	.....	6-30-02	205

average, in second-class 10 or a little over. *c* \$400.00 per year before organization. *f* \$1,100.00 per year. *g* \$500.00 per year. *h* \$300.00 per year. *i* \$1,000.00.

**TRADE UNIONS IN IOWA—
CLERKS, RETAIL, INTERNATIONAL**

Mar- g nal num- ber.	Locality and Number of Union.	Year when organ- ized.	Num- ber of mem- bers.	Length of Work Day— Hours—		Minimum Day Wage.		
				Before organ- ization	Since or gan- ization.	Before organ- ization	Since orga ni- zation.	
206	Albia.....	379	1900	62	16	12	a	b
207	Boone.....	889	1900	34	10	10	n	d
204	Burlington.....	229	1901	71	13	11	n	n
209	Bussey.....	855	1908	25	n	n	n	n
210	Cedar Rapids.....	290	1899	70	n	n	n	n
211	Centerville.....	895	1900	48	15	12	n	n
212	Clinton.....	188	1899	92	n	n	n	n
213	Council Bluffs.....	234	1900	10	n	n	n	n
214	Creston.....	717	1902	55	11	11	d	n
215	Davenport.....	405	1900	99	n	n	n	n
216	Des Moines.....	80	1900	127	14	10	n	n
217	Dubuque.....	301	1901	21	14	11	n	n
218	Eddyville.....	28	1902	24	n	n	n	n
219	Fairfield.....	518	1902	10	n	n	n	n
220	Fort Madison.....	772	1903	92	12	12	n	d
221	Jefferson.....	537	1902	80	18	13	n	n
222	Keokuk.....	474	1901	32	10	10	n	n
223	Lucas.....	896	1899	11	n	n	n	n
224	Lyons.....	57	1902	28	12	11	n	n
225	Mason City..	606	1902	70	12	11	n	n
226	Marion.....	530	1902	15	n	n	n	n
227	Marshalltown.....	563	1902	75	12	10 ^{1/2}	n	n
228	Muscatine.....	93	1893	89	n	n	n	n
229	Newton.....	726	1902	39	n	n	n	n
230	Oelwein.....	749	1903	44	14	12	n	n
231	Oskaloosa.....	277	1901	90	14	10	n	d
232	Ottumwa.....	87	1880	50	14	10 ^{1/2}	n	n
233	Sioux City.....	46	1897	60	14	10 ^{1/2}	n	n
234	Vinton.....	750	1903	42	n	n	n	n
235	Waterloo.....	781	1903	55	n	n	n	n

The hours quoted refer to 5 days of the week, on Saturday the hours average 16.
 c \$60.00 per month. d \$20.00 per month. e \$100.00 per month. Retail
 employees are paid less. f The monthly dues for male clerks is 25 cents, for female

CONDUCTORS, ORDER

						Month.	Month.
236	Belle Plaine.....	410	1900	25	a	10	*\$50.00 *\$ 90.00
237	Boone.....	84	1882	45	a	10	* 50.00 * 90.00
238	Cedar Rapids.....	58	1878	53	a	10	* 50.00 * 90.00
239	Clinton.....	58	1883	73	a	10	* 50.00 * 90.00
240	Creston.....	21	1879	42	a	10	* 50.00 * 90.00
241	Des Moines.....	88	1876	70	a	10	* 50.00 * 90.00
242	Dubuque.....	347	1898	52	12	10	* 50.00 * 90.00
243	Eagle Grove.....	184	1885	53	a	10	* 50.00 * 90.00
244	Etherville.....	953	1883	28	a	10	* 50.00 * 90.00
245	For Dodge.....	98	1884	37	a	10	* 50.00 * 90.00
246	Marion.....	208	1891	41	a	10	* 50.00 * 90.00
247	Oskaloosa.....	4	1887	54	a	10	* 50.00 * 90.00
248	Mason City.....	22	1881	56	a	10	* 2.50 * 3.00
249	Ottumwa.....	216	1890	50	a	10	* 50.00 * 90.00
250	Perry.....	84	1884	35	a	10	* 50.00 * 90.00
251	Sioux City.....	232	1888	105	a	10	* 50.00 * 90.00
252	Valley Junction.....	361	1894	41	a	10	* 50.00 * 90.00
253	Waterloo.....	67	1883	43	a	10	* 50.00 * 90.00
254	Carroll.....	294	1900	20	a	10	* 50.00 * 90.00
255	Burlington.....	31	1882	49	a	10	* 50.00 * 90.00

a Hours for days work previous to organization "unlimited." b Imprac
 paid by the Grand Division through the Insurance Department. i The local dues
 raised by special assessment, as are also the insurance premiums. * The wages
 have a schedule of \$3.00 to \$3.30 per 100 miles; on way freight trains \$3.15 to \$3.50 per 100

TABLE No. 1—CONTINUED.

PROTECTIVE ASSOCIATION

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
n	c			25c		\$ 100.00	8-18-03	206
c	n			25c.			8-24-03	207
n	n			38 ¹ / ₂ c.			7-22-02	208
n	n			25c.			7-17-03	209
n	n						8-6-03	210
n	n			25c			6-30-03	211
n	n						8-6-03	212
n	n						8-6-03	213
n	n						8-6-03	214
c	n			25c.			8-18-03	215
n	n						8-6-03	216
n	n			50c	\$ 51.00		9-15-02	217
n	n			38 ¹ / ₂ c.	40.00		12-30-02	218
n	n						8-6-03	219
n	n						8-6-03	220
n	c			25c.			4-14-03	221
n	n			25c.			4-10-03	222
n	n			25c.			12-10-02	223
n	n						8-6-03	224
n	n			25c.			7-1-02	225
n	n			25c.			4-1-03	226
n	n			n			8-6-03	227
n	n			25c.			8-6-03	228
n	n			n			8-6-03	229
n	n			n			8-6-03	230
n	n			34 ¹ / ₂ c.			4-1-08	231
n	c			25c.	40.00	200.00	4-2-08	232
n	n			25c.	50.00	100.00	12-15-02	233
n	n			38 ¹ / ₂ c.			7-20-03	234
n	n			n			8-6-03	235
n	n			n			8-24-03	236

a \$25.00 to \$40.00 per month according to kind of store. b \$25.00 to \$50.00 per month
 clerks have no definite wage scale, the prices quoted refer to male employees only, female
 clerks 12¹/₂ cents. n Not reported.

OF RAILWAY

Month.	Month.							
* 100.00	* 150.00	b	b	50c.	n	n	7-2-02	236
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	237
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	238
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	239
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	240
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	241
* 100.00	* 150.00	b	b	50c.	n	n	7-4-02	242
* 100.00	* 150.00	b	b	50c.	n	n	7-4-02	243
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	244
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	245
* 100.00	* 150.00	b	b	50c.	n	n	4-2-03	246
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	247
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	248
* 100.00	* 150.00	b	b	50c.	n	n	7-1-02	249
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	250
* 100.00	* 150.00	b	b	50c.	n	n	4-7-03	251
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	252
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	253
* 100.00	* 150.00	b	b	50c.	n	n	6-9-03	254
* 100.00	* 150.00	b	b	50c.	n	n	7-12-02	255

ticable to show wage gain per hour. n not reported, benefits of this character are
 quoted are purely for local expense. Delegates and representative committee expenses are
 quoted are the best monthly averages obtainable. Conductors on through freight trains
 miles; passenger conductors from \$115.00 to \$150.00 per month. A Per day.

TRADE UNIONS IN IOWA

COOPERS INTERNATIONAL

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
256	Burlington.....	1898	11	n	n	n	n
257	Cedar Rapids.....	1899	30	n	n	n	n
	Davenport.....	19. 1	9	n	n	n	n
258	Des Moines.....	1900	15	12-14	8-10	\$ 1.50	\$ 1.80
259	Dubuque.....	1898	12	10	10	1.50	2.50
260	Keokuk.....	1901	15	10	10	n	1.50
261	Ottumwa.....	1901	30	10	10	2.50	2.50
262	Sioux City.....	1899	14	10	10	2 50	3.00

n Not reported.

ELECTRICAL WORKERS OF AMERICA,

268	Boone.....	1908	n	n	n	n	n
264	Cedar Rapids.....	1902	19	10	9	2.00	2.50
265	Cedar Rapids.....	1902	n	n	n	n	n
266	Clinton.....	1902	n	n	n	n	n
267	Davenport.....	1901	n	n	n	n	n
268	Des Moines.....	1891	110	10	a 8-9	1.50	2.50
269	Dubuque.....	1901	30	10	y	1.00	1.80
270	Fort Dodge.....	1903	34	10	10	1 75	
271	Mason City.....	1902	31	10	10	1 50	2.00
272	Muscatine.....	1902	n	n	n	n	n
273	Ottumwa.....	1901	25	b 10	9	1.40	2.25
274	Oskaloosa.....	1902	23	10	9	2.50	2.50
275	Sioux City.....	1899	50	10	n	n	n
276	Waterloo.....	1902	n	n	n	n	n

a Inside wiremen 8 hours, linemen 9 hours.

b 16 hours per day is reported

ENGINEERS, BROTHER

277	Belle Plaine.....	1890	34	a	10	b	c
278	Boone.....	1867	110	a	10	2.50	3.75
279	Burlington.....	1871	10	a	10	b	c
280	Cedar Rapids.....	1872	92	a	10	b	c
281	Clinton.....	1870	102	a	10	b	c
282	Des Moines.....	1871	95	a	10	b	c
283	Dubuque.....	1882	78	a	10	b	2.75
284	Eagle Grove.....	1883	54	a	10	b	c
285	Eldon.....	1874	35	a	10	b	2.95
286	Etherville.....	1863	60	a	10	b	c
287	Fort Dodge.....	1883	71	a	10	b	c
288	Fort Madison.....	1889	72	a	10	b	c
289	Lake City.....	1890	52	a	10	b	c
290	Marion.....	1893	30	a	10	b	c
291	Mason City.....	1870	50	a	10	b	c
292	Mason City.....	1884	30	a	10	b	c
293	Oskaloosa.....	1893	65	a	10	b	3.50
294	Perry.....	1892	72	a	10	b	c
295	Sanborn.....	1885	22	a	10	b	3.80
296	Sioux City.....	1881	73	a	10	b	c
297	Sioux City.....	1892	42	a	10	b	c
298	Stuart.....	1874	25	a	10	b	c
299	Valley Junction.....	1895	70	a	10	b	c
300	Walsh.....	1885	32	a	10	b	c
301	Waterloo.....	1870	65	a	10	b	c

a Length of work day "unlimited" previous to organization, and no allowance and overtime is computed on the basis of 10 miles an hour; where hours exceed miles on previous to organization did not exceed \$75.00 per month. c Since organization, minimum per 100 miles in passenger service to \$4.50 per 100 miles, maximum, in freight per month is established by agreement on some roads. Yard engineers are paid by the hour. e These benefits are usually paid through the insurance department of the dues quoted are purely for local expense; delegate and representative committee expenses

—TABLE No. 1—CONTINUED.

UNION OF NORTH AMERICA.

Day Wage of Most Skilled.		Wage Gain per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
n	n			n	n	n	6-10-08	256
n	n			n	n	n	6-10-08	257
n	n			n	n	n	6-10-08	258
\$ 2.50	\$ 3.00	8c.	5c.	n	n	n	6-10-08	259
1.80	2.50	10c.	7c.	50c.			2- 2-08	260
n	2.00			25c.			12- 8-02	261
2.75	2.75			50c.	\$ 48.00		6-10-08	262
3.00	3.10	5c.		50c.				

INTERNATIONAL BROTHERHOOD OF

n	n			n	n	n		263
		8c.		60c.			8-18-03	264
n	n			60c.	n	n		265
n	n			60c.	n	n		266
n	n			60c.	n	n		267
2.25	4.50	18c.	27 1/2c.	75c.	266.00		8-10-03	268
2.25	3.00	2c.	11c.	60c.			8-31-03	269
2.50							7-31-03	270
2.00	2.00	5c.		60c.			3- 4-03	271
n	n			n				272
2.00	2.60	11c.	9c.				4-10-03	273
		3c.		60c.			4- 7-03	274
n	n			n	n	n		275
n	n			n	n	n		276

in some instances without extra compensation. n Not reported.

HOOD OF LOCOMOTIVE

b	c	d	d	o 80c.	e	e	7-14-03	277
b	1.40	d	d	o 65c.			8-28-03	278
b	c	d	d	o	e	e	8-17-03	279
b	c	d	d	o	e	e	8-17-03	280
b	c	d	d	o 50c.	e	e	2- 8-03	281
b	c	d	d	o 50c.	e	e	3-28-03	282
b	c	d	d	o 25c.	20.00		4- 2-03	283
b	c	d	d	o 35 1/2c.	e		8- 1-03	284
b	c	d	d	o 65			7-14-03	285
b	c	d	d		e	e	8-17-03	286
b	c	d	d		e	e	8-17-03	287
b	c	d	d	o 25c.	e	\$ 50.00	1-19-03	288
b	c	d	d	o 77c.	75.00	e	7- 4-02	289
b	c	d	d	o	e	e	8-17-03	290
b	c	d	d	o 25c.	e	e	1-17-03	291
b	c	d	d	o	e	e	8-17-03	292
3.00	5.00	d	d	o 50c.	e	e	4- 8-03	293
b	c	d	d	o 60c.	200.00	e	7- 2-03	294
b	c	d	d	o 50c.	e	e	7-16-03	295
b	c	d	d	o 55c.	e	e	7-20-03	296
b	c	d	d	o 50c.	e	e	7-16-03	297
b	c	d	d		e	e	8-17-03	298
b	c	d	d	\$ 1.00	e	e	7-20-03	299
b	c	d	d	o 75c.	240.00	e	7-14-03	300
b	c	d	d		e	e	8-17-03	301

was made for overtime; 10 hours or 100 miles now constitute a day's work in road service this basis, hours are computed instead of miles. b The rate of pay for engineers wages are paid on a mileage basis, and according to class of engine, ranging from a \$3.50 service, for the heaviest type of engines. A guaranteed minimum mileage of 2,600 miles hour, varying from 27 to 30 cents an hour. d Impractical to show wage gains per Grand Division and not from the local treasury. n Not reported. o The local are raised by special assessment, as are also the insurance premiums.

TRADE UNIONS IN

ENGINEERS, INTERNATIONAL

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
302	Dubuque	1908	40	12	12	n	n
303	Fort Dodge	1903	30	12	12	\$ 1.80	.....
304	Ottumwa.....	1902	20	12	12	1.85	\$ 1.85
305	Sioux City.....	1899	60	12	12	n	n

n Not reported.

FIREMEN, BROTHER

306	Belle Plaine.....	311	1896	62	a	10	b	c
307	Boone.....	25	1830	165	a	10	b	c
308	Burlington.....	161	1883	18	a	10	b	c
309	Cedar Rapids.....	27	1879	105	a	10	1.65	1.75
310	Centerville.....	531	1898	50	a	10	b	c
311	Cherokee.....	79	1893	30	a	10	b	c
312	Clinton.....	34	1879	125	a	10	b	c
313	Des Moines.....	102	1882	55	a	10	b	c
314	Dubuque.....	106	1882	35	a	10	b	c
315	Dubuque.....	822	1839	47	a	10	b	c
316	Eagle Grove.....	132	1880	70	a	10	b	c
317	Eldon.....	137	1882	58	a	10	b	c
318	Eatherville.....	238	1886	60	a	10	b	c
319	Fort Dodge.....	222	1834	95	a	10	b	c
320	Fort Madison.....	391	1888	76	a	10	b	c
321	Marion.....	298	1889	53	a	10	b	c
322	Marshalltown.....	125	1882	46	a	10	b	c
323	Mason City.....	29	1890	43	a	10	b	c
324	Oelwein.....	547	1839	35	a	10	b	c
325	Oskaloosa.....	560	1900	40	a	10	b	c
326	Perry.....	124	1882	37	a	10	b	c
327	Sanborn.....	190	1883	20	a	10	b	c
328	Sioux City.....	64	1881	120	a	10	b	c
329	Sioux City.....	112	1898	40	a	10	1.75	1.90
330	Valley Junction.....	249	1895	92	a	10	b	c
331	Waterloo.....	30	1880	60	a	10	b	c

a Length of work day previous to organization "unlimited," and no allowance and overtime is allowed on the basis of 10 miles an hour; where hours exceed miles on this to organization averaged \$45.00 per month and did not exceed \$55.00. c Since organi \$2.50 per 100 miles minimum on small engines to \$2.60 per 100 miles maximum on the large is established by mutual agreement on some roads. Firemen on yard engines are paid by e Benefits under this head are usually paid through the insurance department of the tentative committee expenses are raised by special assessments, as are also the insurance

FIREMEN, INTERNATIONAL

332	Burlington.....	193	1903	n	n	n	n	n
333	Davenport.....	172	1903	42	12	12	1.65	2.00
334	Des Moines.....	79	1901	45	12	8-12	1.75	2.00
335	Dubuque.....	1906	30	12	8-12	1.75	2.00	2.00
336	Ottumwa.....	205	1903	n	n	n	n	n
337	Sioux City.....	202	1903	30	12	12	.....	2.00

n Not reported.

IOWA—TABLE No. 1—CONTINUED.

UNION OF STEAM

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
n	n	.....	.....	50c.	n	n	.....	802
\$ 2.60	\$ 2.60	.....	.....	50c.	n	n	4-10-03	808
n	n	.....	.....	50c.	n	n	4- 8-03	804
n	n	.....	.....	50c.	n	n	.....	806

HOOD OF LOCOMOTIVE

b	c	d	d	o \$1.00	e	e	7-31-03	806
b	c	d	d	1.00	\$ 500.00	.....	8-27-03	807
b	c	d	d	1.00	.....	.....	7-31-03	808
1.90	2.40	d	d	1.00	.....	.....	8-23-03	809
b	c	d	d	1.00	.....	.....	7-19-03	810
b	c	d	d	1.00	.....	.....	7-31-03	811
b	c	d	d	1.00	50.00	\$1,500.00	7-15-03	812
b	c	d	d	1.00	.....	.....	7-16-03	813
b	c	d	d	1.00	.....	.....	8-10-03	814
b	c	d	d	1.00	115.00	.....	4- 2-03	815
b	c	d	d	1.00	.....	.....	7-17-03	816
b	c	d	d	1.00	.....	.....	7-31-03	817
b	c	d	d	1.00	.....	.....	7-31-03	818
b	c	d	d	1.00	.....	.....	7-31-03	819
b	c	d	d	1.00	.....	.....	7-31-03	820
b	c	d	d	1.00	247.00	100.00	7- 1-02	821
b	c	d	d	1.00	.....	.....	7-31-03	822
b	c	d	d	1.00	18.00	.....	7- 7-02	823
b	c	d	d	1.00	.....	.....	7-31-03	824
b	c	d	d	1.00	.....	.....	7-27-03	825
b	c	d	d	1.00	.....	.....	7-31-03	826
b	c	d	d	1.00	.....	.....	8- 8-03	827
b	c	d	d	1.00	.....	.....	7-28-03	828
b	c	d	d	2.00	20.00	.....	7- 8-03	829
b	c	d	d	1.00	.....	.....	7-31-03	830
b	c	d	d	1.00	150.00	.....	7-10-02	831

was made for overtime; 10 hours or 100 miles now constitutes a day's work in road service, basis, hours are computed instead of miles.

b The rate of pay to firemen previous zation wages are paid on a mileage basis, and according to class of engines, ranging from est engines in freight service. A guaranteed minimum mileage of 2,600 miles per month the hour at a 17½ and 20 cent rate.

d Not practical to show wage gains per hour. Grand Lodge.

e Quarterly dues; used only for local expense, delegates and repre-

premiums.

BROTHERHOOD OF STATIONARY

n	n	.....	.....	50c.	16.00	.....	8-16-03	832
2.00	2.25	.....	.....	50c.	.....	.....	8- 6-03	833
2.00	2.25	.....	.....	50c.	.....	.....	8- 1-03	834
2.00	2.25	.....	.....	50c.	.....	.....	.....	835
n	n	.....	.....	50c.	.....	.....	7-38-03	836
.....	2.50	.....	.....	50c.	.....	.....	.....	837

TRADE UNIONS IN IOWA—

*FEDERAL LABOR UNIONS DIRECTLY

Mar- ginal num- ber.	Locality and Number of Union.	Year when organ- ized.	Num- ber of mem- bers.	Length of Work Day— Hours—		Minimum Day Wage.	
				Before organ- ization.	Since organ- ization.	Before organ- ization.	Since organ- ization.
838	Albia..... a	1908	80	10	10	\$ 1.50	\$ 1.75
839	Burlington..... 9145	1901	110	10	10	1.25	1.75
840	Cedar Rapids..... a 8888	1901	"	"	"	"	"
841	Cedar Rapids..... 8920	1902	"	"	"	"	"
842	Cedar Rapids..... b 10176	1902	45	15	14	1.75	2.50
843	Cedar Rapids..... c 10602	1902	"	"	"	"	"
844	Cedar Rapids..... a 10732	1903	65	"	"	1.75	2.00
845	Centerville..... 7310	1899	30	10	9	1.25	1.75
846	Cherokee..... 9876	1902	82	10	10	1.25	1.50
847	Clinton..... 8215	1900	19	10	9	1.25	1.60
848	Clinton..... a 9732	1902	30	10	9	1.50	1.75
849	Clinton..... b 10123	1902	18	12	10	1.50	1.75
850	Clinton..... d 10522	1902	10	12	"	"	"
851	Clinton..... e 10536	1903	17	10	10	1.50	1.60
852	Corydon..... 9837	1902	48	10	10	1.00	1.25
853	Council Bluffs..... 8464	1900	50	10	9	1.25	1.50
854	Davenport..... 8789	1903	55	10	10	.50	"
855	Dubuque..... e 9713	1902	100	10	10	1.25	1.50
856	Dubuque..... f 10739	1903	180	10	10	"	"
857	Des Moines..... g 8894	1901	10	10	10	1.00	1.50
858	Des Moines..... 9870	1902	270	10	9	1.50	1.75
859	Des Moines..... h 9744	1902	30	9	8	2.00	2.25
860	Des Moines..... t 9887	1902	66	10	9	1	"
861	Des Moines..... j 10247	1902	"	"	"	"	"
862	Des Moines..... d 11057	1903	42	10	9	1.00	1.60
863	Fort Dodge..... k 9819	1902	420	10	10	1.50	1.75
864	Fort Dodge..... e 10441	1902	90	10	10	1.45	"
865	Fort Madison..... 1903	"	"	"	"	"	"
866	Iowa City..... a 10820	1902	"	"	"	"	"
867	Keokuk..... a 8943	1901	57	10	10	1.50	2.00
868	Marshalltown..... 9730	1902	65	10	8-10	1.25	1.50
869	Missouri Valley..... e 10739	1903	50	10	10	"	"
870	Muscatine..... 6803	1894	12	10	10	"	"
871	Muscatine..... b 9873	1902	"	"	"	"	"
872	Muscatine..... f 6841	1899	"	"	"	"	"
873	Oelwein..... e 9156	1901	125	10	10	1.35	1.50
874	Oelwein..... 11400	1903	25	10	10	1.50	"
875	Ottumwa..... 8227	1900	30	10	10	1.25	1.50
876	Sioux City..... 7397	1899	18	"	"	"	"
877	Waterloo..... e 9826	1902	120	10	10	1.50	1.70
878	Valley Junction..... e 11364	1903	40	10	10	1.35	"

*Federal labor unions are composed of skilled and unskilled wage earners of various draw and form a separate local union. No skilled workman is eligible for membership in exists in the locality where he resides.

a Building and general laborers. b Ice handlers. c Railway office helpers. f Button workers (pearl). g Soap makers. h Pipe layers. i \$15.00 per month minimum, \$23.00 per month maximum before organization. n and \$7.00 per month wage gain. p Gypsum rock diggers before organization paid on a tonnage basis, 45c. a ton for room digging and for entry or narrow work \$2.00 thing is favorable that \$4.00 can be earned in a day. n Not reported.

FREIGHT HANDLERS AND WARE

879	Cedar Rapids..... 864	1902	30	12	10	Month. \$45.00	Month. \$45.00
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*GARMENT WORKERS

880	Davenport..... 133	1902	69	10	9	"	"
881	Dubuque..... 163	1901	18	10	9	"	"
882	Fort Dodge..... 1903	25	10	10	.60	"	"
883	Oskaloosa..... 78	1899	62	10	9	.50	.85
884	Ottumwa..... 148	1901	10	10	9	1.00	1.10

*This organization is composed of females.

n Not reported.

TABLE No. 1—CONTINUED.

AFFILIATED WITH A. F. OF L.

Day Wage of most Skilled.		Wage Gain per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 1.75	\$ 2.00	2½c.	2½c.	25c.			4-8-08	888
1.75	2.00	5 c.	2½c.	50c.	\$ 500.00	\$ 55.00	2-2-02	889
n	n							890
n	2.50	6½c.	5½c.	50c.			7-19-08	891
n	d							892
1.75	2.00	2½c.	2½c.	85c.			7-7-08	893
2.00	2.38	7 c.	7 c.	25c.		25.00	8-12-02	894
		2½c.		25c.		50.00	8-29-08	895
1.50	1.80	5½c.	5 c.	85c.			6-28-08	896
1.80	2.25	4½c.	7 c.	50c.	10 00		6-27-08	897
1.50	2 00	5 c.	7½c.	25c.	25 00		6-28-08	898
n	n							899
1.65	1.65			50c.			6-28-08	900
1.50	1.75	2½c.	2½c.	25c.			8-10-02	901
1.50	1.50	4 c.	5 c.	35c.			6-28-08	902
				25c.			7-10-08	903
1.50	2.00	2½c.	5 c.	50c.	50 00		6-6-08	904
n	n			25c.	120.00		4-1-08	905
2.50	3.00	5 c.	5 c.	25c.			1-28-08	906
		4½c.		50c.			7-20-02	907
2.25	2.50	8½c.	8 c.	85c.			6-29-08	908
l	m	o	o	85c.	27.00		6-28-08	909
								910
2.20	2.20	18c.	2½c.	50c.			6-2-08	911
2.25	2.50	2½c.	2½c.	25c.	285.00	60.00	4-11-08	912
1.80	n			50c.	58.00	45.00	4-8-08	913
								914
								915
				25c.	12.00		8-31-08	916
1.00	1.80	2½c.	2 c.	25c.			6-28-08	917
n	n			50c.			8-2-08	918
n	n			50c.			2-21-08	919
n	n							920
1.60	2.25	1½c.	7½c.	40c.	25 00		7-8-02	921
				25c.			8-27-08	922
1.50	1.80	4 c.	5 c.	25c.			7-20-08	923
n	n			50c.			2-17-08	924
		2 c.		25c.			7-8-08	925
1.50				25c.			8-27-08	926

occupations. When 15 members of one craft are enrolled it is obligatory on them to with-
a federal union who is not a member of the union of his craft; provided, such a union

clerks. d Gas workers. e Machinists', blacksmiths' and boiler-makers'
f Telephone operators, female. f Janitors. k Gypsum miners and millmen.
\$18.00 per month minimum, \$30.00 per month maximum since organization. o \$3.00
work; d 9 and 9½ hours a day, since organization 8 hours have been established. They are
per yard. Their average daily earnings are \$2.25 although there are cases where every-

HOUSE MEN'S UNION OF AMERICA.

Month.	Month.							
50.00	50.00			80c			7-18-08	879

OF AMERICA, UNITED.

n	n			25c.	n	n	6-0-08	880
n	n			25c.			4-2-08	881
90c	n			n			4-10-08	882
92c	1.60	4½c.	7½c.	40c.	25.00		4-2-08	883
1.00	1.20	2½c.	8½c.	85c.			12-2-02	884

TRADE UNIONS IN IOWA—

GLOVE WORKERS UNION OF

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hour—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
885	Des Moines.....	29	1902	50	10	10	a a

a Glove cutters receive \$1.50, \$2.00 and \$3.00 per day; wax threaders receive \$12 per week.

HORSESHOERS OF UNITED STATES

886	Boone.....	170	1902	18	10	9	a \$2.00	a \$ 2.50
887	Burlington.....	66	1899	n	n	n	n	n
888	Cedar Rapids.....	112	1900	n	n	n	n	n
889	Des Moines.....	48	1899	12	10	9	a 2.00	a 2.50
890	Dubuque.....	174	1902	14	10	10	1.2	2.00
891	Sioux City.....	142	1902	7	10	10	1.50	2.50

a Wages for forgers only, the floormen received \$1.75 minimum and \$2.25 maxi

*HOTEL AND RESTAURANT EMPLOYEES' INTERNATIONAL

							Week.	Week.
892	Boone.....	a 882	1902	22	10	10	10.00	12.50
893	Burlington.....	a 354	1902	64	a	10	n	8.75
894	Cedar Rapids.....	a 396	1902	69	a	10	n	n
895	Cedar Rapids.....	c 891	1902	23	a	g 11	n	e 5.00
896	Clinton.....	819	1902	52	a	n	n	n
897	Council Bluffs.....	a 557	1902	51	a	12	n	n
898	Clinton.....	582	1903	15	a	n	n	n
899	Davenport.....	c.....	1903	60	a	n	n	n
400	Des Moines.....	d 223	1900	k 80	a	10	e 4.50	e 10.00
401	Des Moines.....	a 247	1901	150	a	10	7.0	12.00
402	Des Moines.....	b 810	1902	81	a	g 11	t 8.00	t 11.00
403	Des Moines.....	c 811	1902	20	a	n	8.50	5.00
404	Dubuque.....	a 258	1903	10	a	n	n	n
405	Dubuque.....	c 527	1902	68	a	g 12	n	e 8.00
406	Fort Dodge.....	a 518	1903	23	10	10	10.00	12.00
407	Kokuk.....	a 555	1903	49	12	12	7.00	.....
408	Marshalltown.....	a 520	1902	81	10	9	10.00	10.00
409	Marshalltown.....	c 422	1902	38	g	12	f 5.00	f 7.00
410	Oelwein.....	a 516	1902	11	10	9	n	n
411	Oskalooza.....	a 214	1901	17	n	10	8.00	10.00
412	Ottu wa.....	a 184	1899	35	12	8	9.00	12.00
413	Sioux City.....	c 588	1903	30	n	n	n	n
414	Waterloo.....	a 546	1903	21	n	n	n	n

a Bar tenders only. b Cooks only. c Cooks and waiters in restaurants. d Wages per week. e 12, 14 and 16 hours per day before organization. f Wages wage gain per hour. *Hotel employees in Iowa are not generally affiliated yet with for males only, before organization females received as low as \$2.50 per week to a maximum board. o Mixed culinary occupations composed entirely of colored wage earners.

LABORERS INTERNATIONAL

415	Boone.....	14	1902	168	10	9	1.25	1.50
416	Cedar Rapids.....	70	1902	24	10	n	n	n
417	Cedar Rapids.....	98	1903	30	10	n	n	n
418	Clinton.....	82	1902	110	10	9	1.25	1.75
419	Davenport.....	30	1902	27	10	n	n	n
420	Fort Dodge.....	56	1902	60	10	n	n	n
421	Jefferson.....	2	1902	143	10	10	1.50	1.75
422	Madrid.....	54	1902	15	10	n	n	n
423	Iowa Falls.....	57	1902	34	10	n	n	n
424	Ma-on City.....	122	1903	50	10	n	n	n
425	Ottumwa.....	95	1903	38	10	n	n	n

n Not reported.

TABLE No. 1—CONTINUED.

AMERICA, INTERNATIONAL

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
<i>a</i>	<i>a</i>			50c.			8-8-08	835

\$2.00, \$2.50 and \$4.00 per day; machine operators (females) make \$5.00, \$8.00, \$10.00 and

AND CANADA, INTERNATIONAL JOURNEYMEN

<i>a</i> \$2.50	<i>a</i> \$3.00	8 c.	8 c.	50c.			8-26-08	886
<i>n</i>	<i>n</i>							887
<i>n</i>	<i>n</i>							888
<i>a</i> 2.00	<i>a</i> 3.00	8 c.	18½c.	50c.	\$ 80.00		7-4-08	889
	2.50	11½c.		40c.			4-1-08	890
2.00	2.50	10 c.	5 c.	50c.			7-22-08	891

num before organization, since, the wages are \$2.50 and \$2.75. *n* Not reported.

ALLIANCE AND BARTENDERS' LEAGUE OF AMERICA

Week.	Week.							
20.00	20.00	<i>m</i>	<i>m</i>	50c.	78.00		8-28-08	892
<i>n</i>	12.50	<i>m</i>	<i>m</i>	50c.	80.00		6-10-08	893
<i>n</i>	12.50	<i>m</i>	<i>m</i>	50c.			6-10-08	894
<i>n</i>	<i>e</i> 12.00	<i>m</i>	<i>m</i>	50c.			6-10-08	895
<i>n</i>	<i>n</i>	<i>m</i>	<i>m</i>				8-1-08	896
12.50	<i>n</i>	<i>m</i>	<i>m</i>	50c.			6-10-08	897
<i>n</i>	<i>n</i>	<i>m</i>	<i>m</i>				8-1-08	898
<i>n</i>	<i>n</i>	<i>m</i>	<i>m</i>				8-1-08	899
<i>e</i> 10.00	<i>e</i> 15.00	<i>m</i>	<i>m</i>	75c.	197.00		7-22-08	400
15.00	20.00	<i>m</i>	<i>m</i>	50c.			7-22-08	401
<i>s</i> 15.00	<i>t</i> 18.00	<i>m</i>	<i>m</i>	50c.			7-11-08	402
<i>n</i>	9.00	<i>m</i>	<i>m</i>	50c.			7-9-08	403
<i>n</i>	<i>n</i>	<i>m</i>	<i>m</i>				8-1-08	404
<i>n</i>	<i>f</i> 10.00	<i>m</i>	<i>m</i>	50c.			6-10-08	405
20.00	20.00	<i>m</i>	<i>m</i>	50c.			4-8-08	406
10.00	<i>n</i>	<i>m</i>	<i>m</i>	60c.			8-19-08	407
15.00	15.00	<i>m</i>	<i>m</i>	50c.			6-29-02	408
<i>f</i> 6.00	<i>f</i> 8.00	<i>m</i>	<i>m</i>	50c.			8-24-08	409
<i>n</i>	14.00	<i>m</i>	<i>m</i>	50c.			6-10-08	410
12.00	14.00	<i>m</i>	<i>m</i>	25c.	50.00		4-2-08	411
15.00	18.00	<i>m</i>	<i>m</i>	50c.	50.00		7-30-02	412
<i>n</i>	<i>n</i>	<i>m</i>	<i>m</i>				8-1-08	413
<i>n</i>	<i>n</i>	<i>m</i>	<i>m</i>	50c.			8-28-08	414

d waiters only in restaurants. *e* With board. *f* without board. *g* Seven for head cooks only; second cooks get 33 per cent less. *m* Not practical to show the organization. *n* Not reported. *k* 53 males and 22 females. *l* Wages of \$5.00 per week; since organization the scale is \$6.00 and \$7.00 per week for females with

PROTECTIVE UNION OF AMERICA.

1.50	2.00	4 c.	7½c.	25c.	70.00		8-19-08	415
<i>n</i>	<i>n</i>			25c.			6-19-08	416
				25c.			6-19-08	417
1.50	2.00	7 c.	7½c.	25c.	5.00		8-19-08	418
<i>n</i>	<i>n</i>			25c.			6-19-08	419
<i>n</i>	<i>n</i>			25c.			6-19-08	420
2.00	2.50	2½c.	5 c.	25c.	80.00	\$ 45.00	11-24-02	421
<i>n</i>	<i>n</i>			25c.			6-19-08	422
<i>n</i>	<i>n</i>			25c.			6-19-08	423
<i>n</i>	<i>n</i>			25c.			6-19-08	424
<i>n</i>	<i>n</i>			25c.			6-19-08	425

TRADE UNIONS IN IOWA—
LATHERS INTERNATIONAL UNION

Marginal number.	Location and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
426	Davenport.....	146	1902	18	10	8	\$ 2 00
427	Des Moines.....	8	1900	22	10	8	\$ 2 75
428	Dubuque.....	158	1903	7	10	8	8.00
429	Fort Dodge.....	128	1902	6	10	9	2.25
430	Iowa City.....	168	1908	7	10	10	2.25
431	Sioux City.....	118	1902	12	10	9	2.50
							8.00

LAUNDRY WORKERS, INTERNATIONAL

432	Boone.....	180	1902	a 21	10	9	.75	1.00
433	Boone.....	188	1902	b 17	10	9	1.00	1.00
434	Cedar Rapids.....	59	1902	80	n	n	n	n
435	Des Moines.....	122	1902	c 150	10	10	1.00	1.00
436	Dubuque.....	169	1908	17	n	n	n	n
437	Marshalltown.....	177	1908	8	10	10	.75	1 00
438	Osceola.....	165	1903	12	10	9	.50	.88

a 5 males, 16 females.

b 4 males, 18 females.

c 20 males, 180 females.

LEATHER WORKERS, ON HORSE GOODS,

439	Boone.....	53	1900	17	10	10	b \$1.75	b
440	Burlington.....	86	1901	23	10	n	n	2.00
441	Clinton.....	126	1903	20	10	10	.50	.50
442	Davenport.....	a 11	1898	185	a 8	a 8	2 00	2.50
443	Des Moines.....	62	1900	60	10	10	n	2.50
444	Dubuque.....	75	1901	18	10	n	n	2.00
445	Oskaloosa.....	108	1902	17	10	10	1.00	2 00
446	Ottumwa.....	117	1908	17	10	10	1.50	1.80
447	Sioux City.....	24	1899	12	10	10	1.50	2 00
448	Waterloo.....	46	1899	30	10	10	1.50	2 00

a Members employed at United States arsenal.
ages under that system.b Leather workers generally
n Not reported.

* LETTER CARRIERS,

							Year.	Year.
449	Atlantic.....	604	1897	4	8	8	\$600.00	\$600.00
450	Boone.....	611	1897	6	8	8	\$600.00	\$600.00
451	Burlington.....	222	1892	2	8	8	\$600.00	\$600.00
452	Centerville.....	925	1902	6	8	8	\$600.00	\$600.00
453	Cedar Rapids.....	878	1893	12	8	8	\$600.00	\$600.00
454	Charles City.....	805	1900	4	8	8	\$600.00	\$600.00
455	Creston.....	446	1894	8	8	8	\$600.00	\$600.00
456	Clinton.....	126	1891	12	8	8	\$600.00	\$600.00
457	Council Bluffs.....	814	1898	18	8	8	\$600.00	\$600.00
458	Davenport.....	506	1894	28	8	8	\$600.00	\$600.00
459	Decorah.....	445	1894	8	8	8	\$600.00	\$600.00
460	Des Moines.....	852	1898	41	8	8	\$600.00	\$600.00
461	Dubuque.....	257	1892	8	8	8	\$600.00	\$600.00
462	Fort Dodge.....	645	1898	6	8	8	\$600.00	\$600.00
463	Fort Madison.....	408	1898	7	8	8	\$600.00	\$600.00
464	Fairfield.....	726	1899	8	8	8	\$600.00	\$600.00
465	Keokuk.....	871	1898	13	8	8	\$600.00	\$600.00
466	Iowa City.....	488	1894	7	8	8	\$600.00	\$600.00
467	Independence.....	741	1899	2	8	8	\$600.00	\$600.00
468	Marshalltown.....	353	1893	9	8	8	\$600.00	\$600.00
469	Mason City.....	471	1894	5	8	8	\$600.00	\$600.00
470	Mt. Pleasant.....	660	1898	8	8	8	\$600.00	\$600.00
471	Muscatine.....	644	1898	7	8	8	\$600.00	\$600.00
472	Newton.....	787	1899	2	8	8	\$600.00	\$600.00
473	Sioux City.....	69	1891	19	8	8	\$600.00	\$600.00
474	Waterloo.....	512	1894	10	8	8	\$600.00	\$600.00
475	Webster City.....	653	1898	4	8	8	\$600.00	\$600.00

* Letter carriers are paid \$600.00 for the first year; after that period \$850.00 per year.

TABLE No. 1—CONTINUED.

OF WOOD, WIRE AND METAL.

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 2.00	\$ 2.75	14 c.	14 c.	50c.	.....	.....	8-8-08	426
2.00	3.00	17½c.	17½c.	50c.	.....	.....	8-8-08	427
2.25	3.00	15 c.	15 c.	50c.	.....	.....	8-8-08	428
2.25	3.00	11 c.	11 c.	50c.	.....	.....	8-8-08	429
2.50	3.00	5 c.	5 c.	50c.	.....	.....	8-8-08	430
2.50	3.00	8 c.	8 c.	50c.	.....	.....	8-8-08	431

UNION OF SHIRT, WAIST AND

2.00	2.00	8½c.	2¼c.	25c.	.....	.....	8-29-08	432
1.50	2.00	.....	7¼c.	25c.	.....	.....	8-28-08	433
n	n	.....	.....	n	.....	.....	8-10-08	434
2.50	3.00	.....	5 c.	d 35c.	\$ 80.00	.....	4-2-08	435
n	n	.....	.....	30c.	.....	.....	7-17-08	436
2.00	2.00	2¼c.	.....	40c.	.....	.....	8-16-08	437
2.00	2.00	5¼c.	2¼c.	d 35c.	.....	.....	8-27-08	438

d Dues for males, 85 cents, females, 25 cents.

n Not reported.

UNITED BROTHERHOOD OF

b 2.00	b	.....	.....	\$ 1.00	65.00	.....	6-29-02	439
n	.....	.....	.....	1.00	100.00	.....	6-8-08	440
3.00	3.00	.....	.....	1.00	.....	.....	6-20-08	441
2.00	3.50	6¼c.	18¼c.	1.00	195.00	.....	6-31-02	442
n	3.00	.....	.....	1.00	300.00	60.00	6-8-08	443
n	n	.....	.....	1.00	65.00	.....	6-8-08	444
1.80	3.00	10 c.	12 c.	1.00	.....	.....	4-8-08	445
2.20	2.35	8 c.	1½c.	1.00	.....	.....	4-14-03	446
2.00	2.35	5 c.	8½c.	1.00	60.00	40.00	6-8-08	447
1.75	2.50	5 c.	8½c.	1.00	150.00	100.00	6-8-08	448

employed under the piece work system; the wages quoted are their average daily earn-

NATIONAL ASSOCIATION OF

Year.	Year.	.....	.....	25 c.	.....	.....	6-22-08	449
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	450
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	451
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	452
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	453
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	454
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	455
850.00	850.00	.....	.....	25 c.	.....	.....	7-7-02	456
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	457
850.00	850.00	.....	.....	25 c.	.....	30.00	7-30-02	458
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	459
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	460
850.00	850.00	.....	.....	25 c.	.....	.....	7-1-02	461
850.00	850.00	.....	.....	25 c.	.....	.....	6-30-02	462
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	463
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	464
850.00	850.00	.....	.....	25 c.	.....	.....	8-19-03	465
850.00	850.00	.....	.....	12½c.	.....	.....	6-30-02	466
850.00	850.00	.....	.....	25 c.	.....	.....	6-2-03	467
850.00	850.00	.....	.....	24 c.	.....	.....	6-22-08	468
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	469
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	470
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	471
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	472
850.00	850.00	.....	.....	15 c.	.....	.....	6-22-08	473
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	474
850.00	850.00	.....	.....	25 c.	.....	.....	6-22-08	475

TRADE UNIONS IN IOWA

MACHINISTS, INTERNA

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours.		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
476	Boone	278	1890	24	10	\$ 2.60	\$3.40
477	Burlington	581	1902	48	10	2.00	2.85
478	Cedar Rapids	282	1892	70	10	2.00	2.80
479	Centerville	590	1902	14	10	2.80	2.80
480	Clinton	283	1899	77	10	2.50	3.40
481	Creston	583	1902	19	10	2.75	2.75
482	Davenport	888	1898	105	8-10	2.25	3.00
483	Des Moines	254	1892	75	b	c 2.00	c 2.70
484	Dubuque	879	1901	120	10	3.00	2.90
485	Fort Madison	219	1901	55	10	2.85	3.00
486	Marshalltown	299	1900	48	10	2.00	3.20
487	Muscatine	116	1902	20	10	2.00	2.50
488	Missouri Valley	171	1899	40	10	2.75	3.40
489	Oelwein	290	1899	105	10	2.50	3.45
490	Ottumwa	299	1901	45	10	2.00	2.50
491	Sioux City	178	1891	50	10	2.25	3.45
492	Valley Junction	620	1903	48	10	3.00	3.80
493	Waterloo	314	1892	110	10	2.25	3.40

a Minimum rate June 1, 1900, \$2.60; minimum rate June 1, 1901, \$2.75; minimum and job shops have had a nine hour day since June, 1901. c Wages of machinists in \$2.50 and \$2.60 per day; since organization they get \$3.00, \$3.80 and \$3.45 per day.

*MEAT CUTTERS AND BUTCHER WORK

494	Albia	268	1902	10	"	"	"	"
495	Burlington	179	1902	85	"	"	"	"
496	Cedar Rapids	66	1903	b 250	"	"	"	"
497	Cedar Rapids	206	1902	85	"	"	"	"
498	Centerville	286	1902	25	"	"	"	"
499	Clinton	170	1902	20	"	"	"	"
500	Davenport	279	1903	85	"	"	"	"
501	Des Moines	187	1902	70	13 to 15	11	2.00	2.50
502	Dubuque	296	1903	80	"	"	"	"
503	Marshalltown	181	1903	b 50	10	10	1.50	1.50
504	Oelwein	270	1903	10	14	12	1.50	2.00
505	Oskaloosa	237	1902	10	15	12	a 1.35	a 1.35
506	Ottumwa	144	1901	b 80	10	10	1.00	1.00
507	Sioux City	150	1901	35	"	"	"	"

*Butcher workmen in retail markets have been accustomed to work on Sundays; a Meat for family also furnished free. b Packing house employees

*METAL MECHANICS, INTERNA

508	Dubuque	...	1902	"	"	"	"	"
509	Marshalltown	144	1902	85	9	9	1.40	1.65
510	Ottumwa	159	1902	40	10	10	1.50	1.50

*This organization comprises special machine operators and partially skilled mechanics also eligible. n Not reported.

*METAL WORKERS, INTERNA

511	Clinton	85	1902	"	"	"	"	"
512	Des Moines	80	1902	90	10	9	1.75	3.00

*This organization comprises bridge and fire escape iron workers, grill and wire

—TABLE No. 1—CONTINUED.

TIONAL ASSOCIATION OF

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 2.60	\$ 3.40	8 c.	8 c.	75c.	.....	.....	7-22-03	476
"	"	2½c.	.....	75c.	\$ 6.00	.....	6-17-03	477
2.75	3.80	6 c.	5½c.	75c.	185.00	.....	8-1-03	478
"	"	.....	.....	75c.	.....	.....	1-18-03	479
2.80	3.40	9 c.	6 c.	75c.	150.00	.....	8-11-03	480
2.75	2.75	.....	.....	75c.	.....	.....	6-6-03	481
2.75	4.00	7½c.	12½c.	75c.	40.00	.....	8-12-03	482
c 2.75	c 3.50	10 c.	12 c.	75c.	75.00	.....	7-18-03	483
2.60	3.20	8 c.	6 c.	75c.	520.00	.....	1-30-03	484
2.85	3.50	1½c.	6½c.	75c.	10.00	.....	4-14-03	485
2.60	3.20	12 c.	8 c.	75c.	.....	\$ 75.00	8-10-03	486
3.25	3.25	5 c.	.....	75c.	.....	.....	7-17-02	487
2.75	3.40	6½c.	6½c.	75c.	.....	150.00	8-1-03	488
2.75	3.45	9½c.	7 c.	75c.	100.00	100.00	7-25-03	489
3.00	3.00	5 c.	.....	75c.	.....	.....	8-22-03	490
2.90	3.55	20 c.	6½c.	75c.	146.00	.....	2-26-03	491
3.00	3.90	8 c.	8 c.	\$1.00	.....	.....	8-27-03	492
2.90	3.55	11½c.	9½c.	75c.	150.00	.....	8-31-03	493

rate July 1, 1902, \$3.15; minimum rate July 1, 1903, \$3.40.

b Machinists in contract shops only; those employed in railroad shops, previous to organization, received

n Not reported.

MEN OF NORTH AMERICA—AMALGAMATED.

"	"	.....	.....	5½c.	.....	.....	6-11-03	494
"	"	.....	.....	50c.	.....	.....	6-11-03	495
"	"	.....	.....	50c.	.....	.....	6-11-03	496
"	"	.....	.....	50c.	.....	.....	6-11-03	497
"	"	.....	.....	50c.	.....	.....	6-11-03	498
"	"	.....	.....	50c.	.....	.....	6-11-03	499
2.00	2.50	7 c.	3 c.	50c.	.....	.....	6-11-03	500
"	"	.....	.....	50c.	.....	.....	7-8-02	501
3.00	3.00	.....	.....	50c.	.....	.....	6-11-03	502
2.00	2.50	6 c.	6 c.	25c.	.....	.....	8-21-03	503
2.00	2.00	1½c.	8 c.	5½c.	.....	.....	3-25-03	504
3.25	3.25	.....	.....	50c.	.....	.....	4-8-03	505
"	"	.....	.....	.....	.....	.....	6-11-03	506
"	"	.....	.....	.....	.....	.....	6-11-03	507

since organization this evil is being eliminated as fast as local conditions will permit.

n Not reported.

TIONAL ASSOCIATION OF ALLIED

"	"	.....	.....	.....	.....	.....	.....	508
1.75	2.05	8 c.	8 c.	35c.	5.00	.....	7-31-03	509
2.50	2.50	.....	.....	50c.	.....	.....	12-10-02	510

assistants in machine, blacksmith and boiler shops. Unskilled employes in these depart-

TIONAL UNION OF UNITED

"	"	.....	.....	.....	.....	.....	.....	511
2.00	3.37½	16 c.	17 c.	50c.	.....	.....	8-29-03	512

workers for screens, guards, office fixtures, etc.

n Not reported.

TRADE UNIONS IN IOWA—

*METAL WORKERS INTERNATIONAL

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
513	Boone.....	270	1902	6	10	10	\$2.00 \$ 2.50
514	Burlington.....	58	1900	n	n	n	n
515	Cedar Rapids.....	243	1902	81	10	9	1.50 2.00
516	Clinton.....	255	1902	n	n	n	n
517	Council Bluffs.....	90	1900	12	10	9	2.00 2.25
518	Davenport.....	91	1900	n	n	n	n
519	Des Moines.....	123	1900	50	9	8	1.75 2.40
220	Dubuque.....	818	1908	n	n	n	n
521	Mason City.....	209	1902	8	n	n	n
522	Oelwein.....	236	1902	10	n	n	n
523	Ottumwa.....	147	1902	12	n	n	n
524	Sioux City.....	51	1899	16	10	9	2.00 2.50
525	Waterloo.....	145	1902	9	n	n	n

*This organization comprises sheet metal workers on sheet tin, copper and iron

MINE MANAGERS AND ASSIST

526	Centerville.....	21	1908	18	b 8	b 8	a 70.00	a 73.00
527	Mystic.....	20	1902	18	b 8	b 8	n	n

a Wages paid per month.

b Nominal length of work day; emergencies often

MINE WORKERS OF

528	Albia.....	692	1897	104	10	8	1.75	d
529	Albia.....	798	1900	112	a	8	.70	1.60
530	Altoona.....	407	1897	61	10	8	1.80	d
531	Angus.....	891	1901	25	10	8	1.75	d
532	Beacon.....	178	1894	100	10	8	1.80	d
533	Beacon.....	426	1902	10	10	8	1.85	d
534	Berwick.....	845	1899	202	10	8	1.75	2.00
535	Blackbird.....	958	1899	57	10	8	1.85	d
536	Boone.....	899	1899	425	12	8	1.60	2.04
537	Brazil.....	201	1898	220	12	8	1.00	1.80
538	Bussey.....	69	1898	275	10	8	1.50	2.15
539	Buxton.....	1799	1901	498	10	8	1.70	d
540	Buxton.....	2108	1901	691	10	8	1.70	d
541	Carbondale.....	949	1899	235	10	8	1.80	d
542	Centerville.....	553	1898	700	10	8	1.25	2.00
543	Chariton.....	1983	1901	27	10	8	1.85	d
544	Cincinnati.....	775	1893	212	10	8	1.70	d
545	Clarinda.....	2074	1902	18	10	8	1.85	d
546	Clarkdale.....	239	1899	25	10	8	1.75	d
547	Cleveland.....	1120	1899	350	8	8	1.90	2.15
548	Coalfield.....	1818	1900	51	10	8	1.80	d
549	Coalville.....	892	1897	125	10	8	1.60	d
550	Colfax.....	56	1898	270	10	8	1.60	d
551	Davenport.....	1951	1901	65	10	8	1.80	d
552	Dawson.....	1610	1903	27	10	8	d	d
553	Dean.....	1616	1899	40	10	8	d	d
554	Des Moines.....	55	1897	254	9	8	2.00	2.15
555	Des Moines.....	894	1899	82	10	8	1.25	1.60
556	Des Moines.....	608	1899	80	10	8	1.50	2.56
557	Des Moines.....	1047	1897	71	10	8	d	d
558	Des Moines.....	1140	1900	79	10	8	2.05	2.56
559	Des Moines.....	1504	1900	245	10	8	d	d
560	Diamond.....	1119	1900	33	10	8	1.55	2.15
561	Diamond.....	1603	1900	82	10	8	d	d
562	Douds.....	1973	1900	12	10	8	d	d
563	Dunreath.....	1948	1900	84	10	8	d	d
564	Eddyville.....	2140	1900	41	10	8	d	d
565	Evans.....	835	1899	35	10	8	d	d
566	Evans.....	1962	1900	175	10	8	d	d

TABLE No. 1--CONTINUED

ASSOCIATION, AMALGAMATED SHEET

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 2.25	\$ 2.50	2½c.	2½c.	40c.	.....	.....	8-26-08	513
"	"	.....	.....	.....	.....	.....	.....	514
2.50	8.00	7 c.	8 c.	50c.	.....	.....	8-24-08	515
"	"	.....	.....	.....	.....	.....	.....	516
3.00	9.15	5 c.	5 c.	25c.	.....	.....	7- 4-02	517
"	"	.....	.....	.....	.....	.....	.....	518
2.25	8.00	10½c.	12½c.	50c.	\$ 75.00	.....	8-19-08	519
"	"	.....	.....	.....	.....	.....	.....	520
"	"	.....	.....	.....	.....	.....	.....	521
"	"	.....	.....	.....	.....	.....	.....	522
"	"	.....	.....	.....	.....	.....	.....	523
2.25	8.00	8 c.	11 c.	50c.	.....	.....	2-10-08	524
"	"	.....	.....	.....	.....	.....	.....	525

goods. " Not reported.

ANTS' ASSOCIATION.

70.00	78.00	.....	.....	\$ 1.25	.....	.....	5-18-08	526
"	"	.....	.....	1.25	.....	.....	7-12-08	527

demand more. " Not reported.

AMERICA, UNITED

2.50	d	c	c	85c.	b	b	4-21-08	528
2.80	3.60	c	c	40c.	.....	.....	8-20-03	529
2.50	d	c	c	85c.	.....	.....	7-23-08	530
2.50	d	c	c	40c.	.....	.....	7-23-08	531
2.50	d	c	c	40c.	.....	.....	7-23-08	532
2.50	d	c	c	30c.	.....	.....	7-23-08	533
2.00	2.75	c	c	30c.	.....	\$ 240.00	6-30-02	534
2.50	d	c	c	35c.	.....	.....	7-23-08	535
3.75	4.90	c	c	30c.	b 675.00	285.00	7-24-02	536
2.72	3.44	c	c	40c.	b 600.00	50.00	6- 1-02	537
2.15	2.53	c	c	40c.	.....	.....	4- 7-08	538
2.50	d	c	c	35c.	.....	881.00	7- 5-02	539
2.50	d	c	c	30c.	.....	.....	7-23-08	540
2.50	d	c	c	40c.	.....	.....	7-23-08	541
2.00	3.00	c	c	25c.	b2,000.00	600.00	4- 3-08	542
2.50	d	c	c	35c.	.....	.....	7-23-08	543
2.50	d	c	c	30c.	.....	.....	7-23-08	544
2.50	d	c	c	25c.	.....	.....	7-23-08	545
2.50	d	c	c	30c.	.....	.....	7-23-08	546
3.00	3.50	c	c	40c.	b 430.00	200.00	1-14-08	547
2.50	d	c	c	25c.	.....	.....	7-23-08	548
2.40	d	c	c	30c.	.....	.....	7-23-08	549
2.50	d	c	c	35c.	.....	.....	7-23-08	550
2.50	d	c	c	30c.	.....	.....	6-30-02	551
d	d	c	c	30c.	.....	.....	7-23-08	552
3.50	8.50	c	c	35c.	85.00	25.00	7-12-02	553
2.25	8.30	c	c	45c.	200.00	.....	2-17-08	554
2.40	3.00	c	c	35c.	.....	.....	7-23-03	555
3.00	4.00	c	c	30c.	50.00	100.00	6- 8-08	556
2.50	d	c	c	35c.	.....	.....	7-23-08	557
2.40	d	c	c	30c.	25.00	10.00	6- 9-08	558
2.50	d	c	c	35c.	.....	.....	7-23-08	559
2.88	d	c	c	30c.	.....	70.00	8-31-03	560
2.50	3.50	c	c	25c.	.....	.....	7-23-08	561
2.40	d	c	c	25c.	.....	.....	7-23-08	562
2.50	d	c	c	30c.	.....	.....	7-23-08	563
2.50	d	c	c	35c.	.....	.....	7-23-08	564
2.50	d	c	c	30c.	.....	.....	7-23-08	565
2.60	d	c	c	40c.	.....	.....	3- 2-08	566

TRADE UNIONS IN IOWA—

MINE WORKERS

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hour—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
567	Eveland	1655	1900	87	10	8	d
568	Exline	812	1899	50	10	8	1.75
569	Flagler	534	1899	80	10	8	\$2.00
570	Forbush	708	1897	70	10	8	1.70
571	Foster	172	1900	133	10	8	2.00
572	Fraser	1069	1898	200	10	8	d
573	Frederic	1161	1900	24	10	8	d
574	Hamilton	533	1899	46	10	8	d
575	Harkes	159	1899	118	10	8	d
576	Hilton	1727	1901	253	10	8	2.10
577	Hiteman	916	1898	450	10	8	2.10
578	Hocking	1121	1899	326	10	8	2.10
579	Hynes	242	1896	330	10	8	d
580	Jerome	387	1898	46	10	8	1.25
581	Keb.	154	1901	200	10	8	d
582	Knoxville	1958	1901	40	10	8	d
583	Laddsdale	908	1899	92	10	8	d
584	Lehigh	855	1899	175	10	8	1.84
585	Lost Creek	325	1898	114	10	8	d
586	Lost Creek	1230	1898	80	10	8	d
587	Lucas	799	1897	121	10	8	d
588	Marquisville	851	1898	290	10	8	d
589	Marysville	1308	1899	12	10	8	d
590	Mendota	738	1898	224	10	8	d
591	Muchakinock	1471	1900	198	10	8	d
592	Mystic	684	1898	569	10	8	d
593	New Market	1904	1901	140	10	8	d
594	Numa	875	1894	242	10	8	1.40
595	Oskalosa	97	1899	201	10	8	1.50
596	Oskalosa	1470	1898	126	10	8	1.60
597	Otley	1265	1900	16	10	8	1.70
598	Ottumwa	162	1891	175	10	8	1.45
599	Ottumwa	613	1898	45	10	8	1.50
600	Ottumwa	1965	1901	40	10	8	1.60
601	Pekay	790	1898	200	10	8	1.75
602	Pella	1493	1902	27	10	8	1.00
603	Rathbun	872	1898	102	10	8	1.50
604	Runnells	792	1900	73	10	8	1.70
605	Shawville	2341	1903	45	10	8	d
606	Seevera	671	1900	320	10	8	1.80
607	Seymour	243	1899	175	10	8	1.40
608	Van Meter	1877	1901	32	10	8	1.50
609	What Cheer	841	1897	200	10	8	1.50
610	Willard	817	1899	70	10	8	1.60
611	Woodward	1761	1901	30	10	8	1.50

a. The working hours per day for coal miners before organization was nominally 10, items also include such amounts of financial relief other than for sickness which was c. The data furnished by the secretaries is too irregular and indefinite to permit any tabular earnings, b. cause conditions vary from day to day. The contract prices for digging are eged to be highly satisfactory by both parties. Besides the miners who dig coal at spec by the day or hour; previous to organization they received various rates, from \$1.25 to organization these rates have advanced from time to time, and at the sixth convention in inside adult labor a minimum of \$2.36 per day. For further details see chapter on "Wage

MOLDERS UNION OF

612	Burlington	859	1902	36	10	10	2.10
613	Cedar Rapids	193	1891	n	n	n	n
614	Davenport	230	1898	n	n	n	n
615	Davenport	237	1899	n	n	n	n
616	Des Moines	316	1900	48	10	9	2.00
617	Dubuque	263	1900	50	10	10	2.50
618	Keokuk	73	1899	12	10	10	2.50
619	Marshalltown	91	1908	14	10	10	2.50
620	Ottumwa	203	1900	18	10	10	2.00

n Not reported.

TABLE No. 1—CONTINUED.

AMERICA—CONTINUED.

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported.	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 2.40	d	c	c	85c.			7-23-03	597
3.00	\$ 8.00	c	c	30c.		48.00	7-19-02	568
3.00	4.00	c	c	40c.	\$ 10.00		6-18-03	569
2.10	2.66	c	c	25c.	82.00		6-18-03	570
2.20	2.56	c	c	40c.	50.00	50.00	8-24-08	571
2.50	2.80	c	c	30c.			7-23-03	572
2.40	d	c	c	30c.			7-23-03	573
2.50	d	c	c	25c.			7-23-03	574
2.60	d	c	c	30c.			7-23-03	575
3.00	4.00	c	c	40c.			7-9-02	576
2.70	4.00	c	c	25c.		150.00	4-20-03	577
2.70	2.50	c	c	25c.	500.00	200.00	7-12-02	578
2.25	2.50	c	c	30c.			7-23-03	579
2.40	4.00	c	c	35c.			6-10-08	580
2.50	d	c	c	25c.			9-9-02	581
2.30	d	c	c	25c.			7-23-03	582
2.25	d	c	c	25c.			7-23-03	583
2.50	d	c	c	25c.			7-26-02	584
2.40	d	c	c	25c.			7-23-03	585
2.40	d	c	c	25c.			7-23-03	586
2.30	d	c	c	30c.			7-24-03	587
2.50	d	c	c	40c.		150.00	9-9-02	588
2.30	d	c	c	30c.			7-23-03	589
2.00	d	c	c	25c.			7-23-03	590
2.20	d	c	c	25c.			7-23-03	591
2.70	d	c	c	30c.			7-23-03	592
2.00	2.50	c	c	25c.			7-9-02	593
2.00	2.37	c	c	35c.	386.00		5-20-03	594
2.00	2.70	c	c	25c.			4-8-03	595
2.50	d	c	c	30c.			7-23-03	596
2.50	d	c	c	25c.			7-23-03	597
2.50	d	c	c	50c.	200.00	150.00	6-20-03	598
2.00	3.00	c	c	40c.	200.00		4-16-03	599
2.50	d	c	c	35c.			6-18-03	600
3.00	3.50	c	c	40c.	250.00		4-13-03	601
d	d	c	c	30c.	25.00		2-15-03	602
2.50	d	c	c	30c.			7-23-03	603
2.50	d	c	c	25c.			7-23-03	604
d	d	c	c	25c.			7-23-03	605
2.50	d	c	c	30c.			7-23-03	606
2.50	2.50	c	c	30c.	300.00	40.00	6-30-02	607
1.75	2.15	c	c	30c.	40.00		7-12-02	608
2.00	3.00	c	c	45c.			4-2-03	609
2.40	d	c	c	30c.	250.00	10.00	7-21-02	610
1.80	3.00	c	c	30c.			6-30-02	611

but many local unions report 10, 12 and 14 hours, and some as "unlimited." *b* These afforded members in distress; in addition \$3,445 was allowed by the district organization. *c* Miners state it is a difficult matter to report their daily arranged at annual joint conferences of operators and miners. This method is acknowledged prices per ton, there are numerous other employees in and around the mines who work \$1.80 per day of 10 hours for outside work, and \$1.50 to \$2.00 per day for inside work; since Des Moines, in 1903, the minimum rates for top labor was fixed at \$1.80 per day, and for Scales and Trade Agreements."

NORTH AMERICA, IRON

n	n	4c.	.....	1.00	.....	.....	1-30-03	612
n	n	.....	.....	.....	.....	.....	.....	613
n	n	.....	.....	.....	.....	.....	.....	614
n	n	.....	.....	.....	.....	.....	.....	615
2.25	3.00	8c.	11c.	1.00	.....	.....	8-28-03	616
2.50	3.00	5c.	5c.	1.00	218.00	200.00	4-1-03	617
2.50	2.75	2½c.	2½c.	1.00	10.00	.....	7-8-02	618
2.50	2.50	.....	.....	1.00	.....	.....	8-3-03	619
2.60	3.00	5c.	4c.	1.00	.....	.....	2-24-03	620

**TRADE UNIONS IN IOWA—
MILL EMPLOYEES' INTERNATIONAL**

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours.		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
621	Cedar Rapids..... 16	1902	40	11	11	\$1.70	\$1.90
622	Cedar Rapids..... a20	1902	120	10	10	n	n
623	Cedar Rapids.....	1902	n	n	n	n	n

n Not reported.

a Organization of female employees exclusively secured a

MUSICIANS, AMERICAN

624	Cedar Rapids..... 137	1901	100	a	a	b	b
625	Clinton..... 79	1900	55	a	a	b	b
626	Council Bluffs..... 212	1902	28	a	a	b	b
627	Davenport..... 67	1897	170	a	a	c	c
628	Des Moines..... 75	1898	90	a	a	.....	.....
629	Dubuque..... 239	1903	35	a	a	b	b
630	Marshalltown..... 176	1902	44	a	a	e 50c.	e 2.50
631	Ottumwa..... 64	1898	50	a	a	b	b
632	Sioux City..... 254	1902	94	a	a	b	b

a Hours for musicians are irregular.

b Prices vary so much for different instru

chapter on Trade Union wage scales and agreements.

d Not practical to show wage

PAINTERS, DECORATORS AND PAPER

633	Burlington..... 521	1900	52	10	9	1.50	2.53
634	Cedar Rapids..... 601	1902	n	n	n	n	n
635	Centerville..... 292	1901	18	10	9	2.00	2.70
636	Clinton..... 183	1900	70	10	2-9.	1.50	2.25
637	Council Bluffs..... 107	1899	28	10	8	2.00	2.40
638	Creston..... 673	1902	17	10	9	2.00	2.70
639	Davenport..... 199	1900	98	10	8	2.25	2.50
640	Des Moines..... 246	1897	180	10	8	2.50	3.00
641	Dubuque..... 693	1902	n	n	n	n	n
642	Fairfield..... 543	1902	n	n	n	n	n
643	Fort Dodge..... 754	1902	52	10	9	2.00	2.70
644	Iowa City..... 796	1902	34	10	10	2.50	2.75
645	Keokuk..... 83	1899	28	10	9	2.00	2.25
646	Marshalltown..... 573	1902	43	10	10	1.25	2.50
647	Mason City..... 805	1902	n	n	n	n	n
648	Muscatine..... 615	1902	32	10	9	1.75	1.98
649	Newton..... 735	1902	n	n	n	n	n
650	Oelwein..... 773	1902	20	10	10	2.50	2.50
651	Oakaloosa..... 925	1903	35	10	10	2.25	2.50
652	Ottumwa..... 133	1900	35	10	9	1.50	2.52
653	Sioux City..... 214	1899	122	10	8	2.50	3.00
654	Waterloo..... 610	1902	60	10	10	1.50	2.50

n Not reported.

PLASTERERS, INTERNATIONAL

655	Albia..... 259	1903	8	10	9	2.50	3.00
656	Cedar Rapids..... 180	1899	14	10	8	3.00	4.00
657	Des Moines..... 21	1897	25	10	8	3.00	4.00
658	Dubuque..... 145	1902	10	9	8	2.50	4.00
659	Fort Madison..... 162	1900	10	10	9	2.50	3.00
660	Marshalltown.....	1902	7	10	8	3.00	4.00
661	Mason City..... 253	1903	13	10	9	3.50	4.00
662	Iowa City..... 235	1902	9	10	8	3.00	4.00
663	Sioux City..... 41	1901	n	n	n	n	n

n Not reported.

TABLE No. 1—CONTINUED.

UNION OF FLOUR AND CEREAL

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$3.00	\$3.10	1c.	1c.	50c.			7-29-08	621
n	n			55c.			8-18-08	622
								623

raise of 5 to 20 per cent since organization.

FEDERATION OF

b	b	d	d	25c.		6-12-08	624
b	b	d	d	25c.		6-12-08	625
b	b	d	d	25c.		2-17-08	626
c	c	d	d	20c.		2-22-08	627
		d	d	25c.			628
b	b	d	d	25c.		6-12-08	629
e 4.00	e 6.00	d	d	25c.		8-2-02	630
b	b	d	d	25c.		6-12-08	631
b	b	d	d	25c.		2-7-08	632

ments that no definite figures can be stated. c See scale for Davenport musicians in gains per hour. e Prices per evening for music rendered between 8 and 12 P. M.

HANGERS OF AMERICA, BROTHERHOOD OF

2.00	2.52	18 c.	8 c.	50c.	\$ 96.00	\$ 100.00	7-12-02	633
n	n							634
2.50	3.00	19 c.	8 c.	50c.	10.00		4-25-08	635
2.25	3.15	10 c.	9 c.	35c.	221.00		8-31-08	636
2.50	3.00	10 c.	12½c.	50c.			7-5-02	637
2.70	2.70	10 c.	8 c.	50c.			8-19-08	638
2.25	3.00	8½c.	15 c.	50c.	200.00		5-25-08	639
2.75	4.00	12½c.	22½c.	50c.			4-15-08	640
n	n							641
								642
2.50	2.70	10 c.	5 c.	50c.			4-8-08	643
2.50	2.75	2½c.	2½c.	35c.			1-4-03	644
2.00	2.52	5 c.	8 c.	50c.			7-2-02	645
2.50	3.00	12½c.	5 c.	50c.			3-22-08	646
n	n							647
2.25	2.52	4½c.	5½c.	50c.			1-20-08	648
n	n							649
2.75	2.75			35c.			8-24-03	650
2.50	2.75	2½c.	2½c.	50c.			4-2-08	651
1.80	2.52	13 c.	10 c.	50c.		25.00	12-28-02	652
2.50	3.50	12½c.	18½c.	50c.			7-14-08	653
2.00	2.50	10 c.	5 c.	35c.			7-10-02	654

ASSOCIATION OF OPERATIVE

4.00	4.50	15c.	10c.	\$.50			7-18-08	655
3.00	4.50	20c.	27½c.	.50			7-10-08	656
3.00	4.00	20c.	20c.	.25	105.00		7-10-02	657
3.00	4.00	22c.	16½c.	.25			4-5-08	658
3.00	4.05	15c.	15c.	.50	25.00		4-14-08	659
3.50	4.50	20c.	21½c.	.50			7-12-08	660
3.50	4.05	10c.	10c.	.35			8-15-08	661
3.50	4.00	20c.	15c.	.50			12-19-02	662
n	n							663

TRADE UNIONS IN IOWA

PLUMBERS, GAS FITTERS, STEAM FITTERS AND HELPERS OF

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
664	Boone.	867	1902	17	9	9	\$ 2.00
665	Burlington.	212	1900	19	n	n	a \$2.52
666	Cedar Rapids.	125	1897	14	10	8	2.00
667	Clinton.	226	1900	6	n	n	n
668	Davenport.	387	1902	30	9	8	2.00
669	Davenport. (S. F. H.)	408	1903	n	n	n	3.50
670	Des Moines.	33	1899	59	9	8	1.50
671	Dubuque.	66	1892	24	10	9	1.75
672	Fort Dodge.	875	1903	n	n	n	2.82
673	Keokuk.	177	1899	8	10	10	n
674	Ottumwa.	183	1899	6	n	n	b 3.00
675	Sioux City.	18	1893	21	10	8	n
676	Waterloo.	304	1902	12	10	9	4.00

a Wages for plumbers and steam fitters only; gas fitters receive \$2.25 per day; for plumbers only; steam fitters receive \$2.00 and \$2.50 per day. S. F. H. Steam

PRINTING PRESSMEN'S

677	Cedar Rapids.	104	1899	34	10	9	1.25	1.50
678	Des Moines.	86	1898	40	10	9	1.50	2.00
679	Des Moines.	* 46	1898	n	n	n	n	n
680	Dubuque.	101	1898	8	10	9	2.00	2.50
681	Ottumwa.	96	1898	10	10	9	1.25	1.75
682	Sioux City.	68	1898	16	10	9	1.75	2.33
683	Sioux City.	* 21	1898	13	10	9	1.50	1.75

* Press feeders' unions. n Not reported.

* RAILWAY EXPRESSMEN OF

684	Cedar Rapids.	27	1908	77	a 12	a 12	b Mo. 40.00	Month n
685	Des Moines.	5	1908	82	12	12	b 40.00	b 45.00
686	Sioux City.	11	1908	80	12	12	b 40.00	n

* Clerks in local offices, wagon drivers in cities and messengers on railroad express ment. b Wages quoted refer to drivers only; clerks receive \$50.00 to \$75.00 per month service. n Not reported.

RAILWAY EMPLOYEES OF AMERICA,

687	Boone.	384	1903	14	a	a	n	n
688	Burlington.	212	1901	47	a 12	a 12	1.33	1.50
689	Clinton.	300	1902	20	a	a	n	n
690	Council Bluffs.	288	1902	144	a	a	n	n
691	Davenport.	312	1902	100	a	a	n	n
692	Dubuque.	329	1903	70	a	a	n	n
693	Muscatine.	363	1903	18	a	a	1.17	1.17
694	Ottumwa.	199	1901	40	a 12	a 12	1.08	1.32

a Hours worked per day are nominally 12, including Sundays; frequently they

STEREOTYPERS AND ELECTROTYPERS,

695	Des Moines.	40	1898	19	10	8	1.25	2.25
696	Sioux City.	41	1899	15	10	9	1.00	2.00

TABLE No. 1—CONTINUED.

THE UNITED STATES AND CANADA, UNITED ASSOCIATION OF

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 2.52	a \$3.00	8c.	5½c.	\$ 1.20	.....	.....	8-26-08	664
"	"	.....	.....	"	.....	.....	10-...-02	665
8.00	8.00	17½c.	7½c.	.50	.....	.....	6-28-02	666
"	"	.....	.....	"	.....	.....	10-...-02	667
8.00	8.75	21c.	18c.	1.20	.....	.....	8-14-06	668
"	"	"	.....	.....	.....	.....	.....	669
8.00	8.50	27c.	10c.	1.25	\$ 60.00	.....	8-...-08	670
8.25	8.78	11½c.	9½c.	.80	.....	.....	6-30-02	671
"	"	.....	.....	.....	.....	.....	.....	672
2.50	b 8.03	5c.	5c.	1.20	.....	.....	1-18-08	673
"	"	.....	.....	.....	.....	.....	10-...-02	674
"	4.00	.....	.....	1.20	45.00	\$ 100.00	10-...-02	675
8.00	8.50	18½c.	9c.	.80	.....	.....	11-...-02	676

steam fitters' helpers, \$2.10 per day; gas fitters' helpers, \$1.75 per day.
fitters' helpers union. n Not reported.

b Wages

UNION, INTERNATIONAL

2.50	3.00	4c.	8c.	.50	.....	.....	8-8-03	677
2.00	3.33	7c.	17c.	.75	\$ 150.00	.....	7-2-08	678
"	"	.....	.....	"	.....	.....	.....	679
2.50	4.00	8c.	18c.	.50	.....	.....	4-2-08	680
2.50	3.50	7c.	14c.	.75	.....	.....	4-7-08	681
4.66	7.00	8c.	31c.	.75	.....	.....	7-13-08	682
.....	.....	4½c.	.....	.50	.....	.....	7-14-08	683

AMERICA, BROTHERHOOD OF

Month.	Month.			50c.			7-11-03	684
c 50.00	"	.....	.....	50c.	.....	.....	6-15-08	685
c 50.00	c 53.00	.....	.....	50c.	.....	.....	7-11-08	686
c 50.00	"	.....	.....	50c.	.....	.....	.....	.....

cars are eligible for membership. a On Sundays there is an alternate relief arrangement and messengers on cars \$65.00 to \$90.00 per month. c Wages of drivers longest in

AMALGAMATED ASSOCIATION OF STREET

"	"	.....	.....	50c.	.....	.....	7-31-08	687
"	"	.....	.....	50c.	21.00	.....	7-18-02	688
"	"	.....	.....	50c.	.....	.....	7-31-03	689
"	"	.....	.....	50c.	.....	.....	7-31-08	690
"	"	.....	.....	50c.	.....	.....	7-31-08	691
"	"	.....	.....	50c.	.....	.....	6-10-08	692
1.50	1.50	.....	.....	50c.	.....	.....	8-31-08	693
1.56	1.92	.....	.....	50c.	.....	.....	12-18-02	694

exceed this number. n Not reported.

INTERNATIONAL UNION OF

2.00	8.00	16c.	17½c.	75c.	.....	.....	9-2-08	695
2.00	8.00	10¼c.	10¼c.	75c.	.....	.....	7-2-02	696

TRADE UNIONS IN IOWA—

STONE CUTTERS ASSOCIATION

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
697	Cedar Rapids.....	1898	21	10	9	\$ 2.50	\$ 3.00
698	Creston.....	1902	10	10	9	2.50	4.05
699	Davenport.....	1900	32	10	8	2.50	3.50
700	Des Moines.....	1898	15	10	8	2.50	3.00
701	Dubuque.....	1902	14	10	8	2.50	3.00
702	Iowa City.....	1902	18	10	9	3.00	3.00
703	Ma-on City.....	1902	7	10	10	3.00	4.00
704	Ottumwa.....	1901	15	10	9	3.00	4.05
705	Quarry.....	1899	7	10	9	2.50	3.00

n Not reported.

SWITCHMEN'S UNION

706	Burlington.....	n 153	n				
707	Cedar Rapids.....	n 92	n				
708	Council Bluffs.....	n 6	n				
709	Des Moines.....	n 174	n				
710	Fort Dodge.....	n 118	n				
711	Fort Madison.....	n 109	n				
712	Marshalltown.....	n 126	n				
713	Marion.....	n 111	n				
714	Oelwein.....	n 84	n				
715	Ottumwa.....	n 89	n				
716	Waterloo.....	n 84	n				

n Not reported.

TAILORS UNION OF

717	Boone.....	184	1903	15	10	10	2.00	n
718	Burlington.....	207	1893	20	a	n	n	n
719	Cedar Rapids.....	160	1898	46	a	n	n	n
720	Clinton.....	230	1896	16	a	n	n	n
721	Council Bluffs.....	231	1896	27	a	n	n	n
722	Davenport.....	800	1900	30	10	10	1.50	2.00
723	Des Moines.....	15	18-5	54	a	n	n	n
724	Dubuque.....	72	1883	45	a	n	n	n
725	Fort Dodge.....	109	1903	25	10	10	1.50	1.80
726	Fort Madison.....	158	19-8	9	a	10	n	n
727	Fairfield.....	846	1902	12	a	n	n	n
728	Iowa City.....	372	1903	10	a	n	n	n
729	Keokuk.....	177	1891	32	a	10	n	2.00
730	Marshalltown.....	116	1902	16	a	n	n	n
731	Oskaloosa.....	104	1903	18	a	10	1.50	2.00
732	Ottumwa.....	68	1883	38	a	10	1.75	2.00
733	Stout City.....	232	1896	55	a	n	n	n
734	Waterloo.....	42	1894	30	a		1.75	2.00

* Reorganized in 1900.

a Hours worked previous to organization reported as. tailors are almost entirely employed under the piece work system it is impossible to show reported.

TABLE No. 1—CONTINUED.

TION, JOURNEYMEN

Day Wage of Most Skilled.		Wage Gain per Hour Since Organizat.on.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
n	\$ 4.50	15c.	.....	50c.	.....	.....	6-18-08	697
n	4.50	20c.	.....	50c.	.....	.....	6-18-08	698
n	4.00	18½c.	.....	50c.	.....	.....	6-18-08	699
n	4.00	20c.	.....	50c.	.....	.....	6-18-08	700
\$ 3.00	4.00	20c.	20c	5½c.	.....	.....	4- 2-08	701
n	4.50	10c.	.....	50c.	.....	.....	6-18-08	702
n	.....	10c.	.....	50c.	.....	.....	6-18-08	703
3 00	4.05	15c.	5c.	85c.	.....	.....	12-10-02	704
n	.....	15c.	.....	50c.	.....	.....	6-18-08	705

OF NORTH AMERICA.

.....	.....	.....	.....	.....	.....	.....	.....	706
.....	.....	.....	.....	.....	.....	.....	.....	707
.....	.....	.....	.....	.....	.....	.....	.....	708
.....	.....	.....	.....	.....	.....	.....	.....	709
.....	.....	.....	.....	.....	.....	.....	.....	710
.....	.....	.....	.....	.....	.....	.....	.....	711
.....	.....	.....	.....	.....	.....	.....	.....	712
.....	.....	.....	.....	.....	.....	.....	.....	713
.....	.....	.....	.....	.....	.....	.....	.....	714
.....	.....	.....	.....	.....	.....	.....	.....	715
.....	.....	.....	.....	.....	.....	.....	.....	716

AMERICA, JOURNEYMEN

2.25	n	c	c	60c.	.....	.....	3-28-08	717
n	n	c	c	60c.	.....	.....	6-20-04	718
n	n	c	c	60c.	.....	.....	6-20-08	719
n	n	c	c	60c.	.....	.....	6- 0-08	720
n	n	c	c	60c.	.....	.....	6-20-08	721
1.80	\$ 2.00	c	c	60c.	.....	.....	12- 2-02	722
n	n	c	c	60c.	.....	.....	7- 5-02	723
n	n	c	c	60c.	.....	.....	4- 2-08	724
n	2.50	c	c	60c.	.....	.....	4- 9-08	725
n	n	c	c	60c.	.....	.....	4-20-08	726
n	n	c	c	60c.	.....	.....	6 2-08	727
n	n	c	c	60c.	.....	.....	6-20-08	728
b 600.00	b900.00	c	c	60c.	.....	\$ 100.00	7- 2-02	729
n	n	c	c	60c.	.....	.....	7- 8-02	730
2.25	3.00	c	c	60c.	.....	.....	4- 8-03	731
2.00	2.25	c	c	60c.	.....	.....	7-28-02	732
n	n	c	c	60c.	.....	.....	6 20-08	733
2.00	2.50	c	c	60c.	.....	.....	8- 4-02	734

"irregular" and sometimes "unlimited."

b Wages earned per year.

c As

wage gains per hour; wage scale and bill of prices are shown under that chapter.

n Not

TRADE UNIONS IN IOWA—

TEAM DRIVERS INTER

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
735	Boone	60	1902	n	n	n	n
736	Boone	279	1903	180	10	9	\$52.50
737	Burlington	218	1902	n	n	n	\$53.00
738	Cedar Rapids	429	1902	n	n	n	n
739	Centerville	172	1903	18	10	10	m20.00
740	Centerville	214	1901	n	n	n	m25.00
741	Clinton	195	1902	n	n	n	n
742	Council Bluffs	213	1902	200	n	n	n
743	Creston	584	1902	85	10	9	c1.80
744	Davenport	563	1902	n	n	n	c2.00
745	Des Moines	45	1902	25	12	12	c1.25
746	Des Moines	90	1899	850	10	8-9	b1.50
747	Des Moines	4-3	1902	n	n	n	b3.50
748	Des Moines	597	1903	120	14-15	12	f
749	Dubuque	567	1902	n	n	n	n
750	Hiteman	142	1902	n	n	n	n
751	Iowa City	408	1902	n	n	n	n
752	Keokuk	182	1902	60	10	10	b3.00
753	Knoxville	477	1902	n	n	n	b3.50
754	Lehigh	188	1903	n	n	n	b3.50
755	Marshalltown	508	1902	64	10	10	b3.00
756	Mystic	249	1902	n	n	n	b3.00
757	Oskaloosa	480	1902	74	10	10	b3.00
758	Ottumwa	500	1902	12	n	n	b3.50
759	Ottumwa	517	1902	84	10	y	b2.25
760	Ottumwa	215	1902	n	n	n	b3.00
761	Pella	285	1903	85	10	10	b3.00
762	Stout City	339	1902	12	11	c	1.75
763	Waterloo	890	1903	22	n	n	c1.75

a Light delivery wagon drivers. b Including team and wagon.
 wagon drivers. Hackmen's union agreement with employers provides that 12
 receive \$40.00 per month and 10 per cent over \$100.00, or 83½ per cent on all money earned.
 the wages given are based on average earnings. m per month. n Not reported.

TELEGRAPHERS' ORDER

764	Cedar Rapids	115	1902	104	a	c12	b25.00	b45.00
765	Mason City	106	1902	.....	.....	.....	.....	.....
766	Oswego	96	1901	.....	.....	.....	.....	.....
767	Oskaloosa	71	1899	23	a	a	b40.00	b40.00
768	Perry	114	1902	200	a	c11½	35.00	45.00

a "Unlimited," nominally supposed to be 12 hours per day, including Sundays,
 c Extra pay allowed for overtime.

TEXTILE WORKERS OF

769	Des Moines	421	1903	a120	10	10	1.00	1.00
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a Males 40, females 80.

TRACTION ENGINEERS AND

770	Des Moines		1903	65	10	8	1.50	1.75
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TABLE No. 1—CONTINUED.

NATIONAL UNION.

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported.	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
.....	\$ 4.50	<i>g</i>	<i>g</i>	<i>n</i>	.....	.....	.....	735
\$ 3.00	b 4.40	.....	.....	50c.	.....	.....	8-26-08	736
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	737
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	738
m 30.00	m 31.00	.....	.....	50c.	.....	.....	4-16-08	739
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	740
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	741
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	742
<i>n</i>	b 3.50	.....	.....	50c.	\$ 5.00	.....	8-19-08	743
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	744
2.00	2.25	.....	.....	50c.	.....	.....	6-20-02	745
b 2.00	b 4.50	.....	.....	50c.	834.00	\$ 865.00	4-15-08	746
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	747
.....	<i>f</i>	.....	.....	50c.	.....	.....	6-6-08	748
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	749
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	750
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	751
b 3.00	b 3.50	.....	.....	50c.	.....	.....	1-1-08	752
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	753
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	754
<i>n</i>	<i>n</i>	.....	.....	50c.	.....	.....	8-24-08	755
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	756
<i>n</i>	b 3.50	.....	.....	50c.	25.00	.....	4-2-08	757
<i>n</i>	<i>n</i>	.....	.....	50c.	.....	.....	7-12-03	759
b 3.00	b 3.50	.....	.....	50c.	.....	.....	8-16-08	760
<i>n</i>	<i>n</i>	.....	.....	.....	.....	.....	.....	761
<i>n</i>	<i>n</i>	.....	.....	50c.	.....	.....	6-30-08	762
<i>n</i>	<i>n</i>	.....	.....	50c.	.....	.....	1-3-08	763
<i>n</i>	<i>n</i>	.....	.....	50c.	.....	.....	8-24-08	768

c Day wage of driver not including team. d Beer wagon drivers. e Milk hours shall constitute a day's work, stable men to receive \$40.00 per month; hackmen to g Wage gains per hour is not attempted, as teamsters frequently haul by the load.

OF RAILROAD.

b 65.00	b 80.00	.....	.....	60c.	.....	.....	9-2-08	764
.....	.....	.....	.....	.....	.....	.....	.....	765
b 65.00	b 65.00	.....	.....	60c.	.....	.....	7-9-02	766
75.00	90.00	.....	.....	60c.	.....	.....	9-5-08	767
.....	.....	.....	.....	.....	.....	.....	.....	768

with no extra pay for overtime.

n Not reported.

b Wages per month.

AMERICA, UNITED.

1.50	1.50			35c.			8-10-08	769
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GENERAL MECHANICS.

2.50	2.40	7c.	5c.	40c.			9-21-08	770
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TRADE UNIONS IN IOWA—

TRAINMEN BROTHER

Marginal num- ber.	Locality and Number of Union.	Year when organ- ized.	Num- ber of mem- bers.	Length of Work Day— Hours—		Minimum Day Wage	
				Before organ- ization.	Since o rani- zation	Before organ- ization.	Since organ- ization.
771	Belle Plaine 212	1886	85	a	e 10	Month b \$40.00	Month c \$ 52.00
772	Boone 204	1887	175	a	e 10	b 40.00	c 52.00
773	Burlington 26	1887	88	a	e 10	n	n
774	Carroll 485	1891	78	a	e 10	45.00	c 52.00
775	Cedar Rapids 56	1885	185	a	e 10	b 45.00	n
776	Centerville 104	1898	25	a	e 10	55.00	78.00
777	Chariton 208	1896	24	a	e 10	n	n
778	Cherokee 522	1893	34	a	e 10	n	n
779	Clinton 183	1898	190	a	e 10	4.00	60.00
780	Council Bluffs. 520	1893	45	a	e 10	n	n
781	Creston 28	1884	114	a	e 10	n	n
782	Des Moines 1 602	1900	40	a	e 10	Month. f 38.00	n
783	Dubuque 2 60	1885	40	a	e 10	45.00	n
784	Dubuque 2 581	1897	68	a	e 10	45.00	n
785	Eagle Grove 188	1885	120	a	e 10	45.00	Month. c 52.00
786	Eldon 348	1890	55	a	e 10	n	n
787	Estherville 362	1890	67	a	e 12	Day. 1.50	Day. 2.10
788	Fort Dodge 171	1886	70	a	e 10	Month. 45.00	Month. 60.00
789	Fort Madison 515	1893	33	a	e 10	n	n
790	Keokuk 567	1898	42	a	e 10	Month. 42.00	Month. 55.00
791	Marion 819	1899	62	a	e 10	45.00	59.00
792	Mason City 9	1884	115	a	e 10	Day. 1.73	Day. 2.00
793	Ottumwa 12	1884	68	a	e 10	n	n
794	Oskaloosa 152	1899	60	a	e 10	n	n
795	Perry 86	1885	75	a	e 10	Month. 45.00	n
796	Sioux City 247	1887	125	a	e 10	Day. 1.73	Day. 2.30
797	Valley Junction 516	1894	56	a	e 10	Day. 1.92	Day. 2.25
798	Waterloo 341	1890	114	a	e 10	n	n

a Hours worked per day before organization reported as "Irregular" and "un-
or over were run. c Wages received per month on a minimum basis of 2,600 miles at
\$30.00. e Since organization 10 hours constitutes a day's work; all overtime exceeding
for at a minimum of 20 cents per hour; in extreme cases it is compulsory to remain on
g The per capita dues show a variation in report because the accident and insurance de
\$1,200.00 insurance; \$1.75 for \$300.00; \$1.00 for \$400.00; the 50 cents quoted constitutes the
mittee work, which varies and is never constant. j \$2.25 per 100 miles schedule price
wage gains per hour for this grade of labor. n Not reported.

TABLE No. 1—CONTINUED.

HOOD OF RAILROAD.

Day Wage of Most Skilled.		Wage Gain Per Hour Since organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union repor. ed.	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
Month. d \$45.00	Month. \$ 120.00	<i>h</i>	<i>h</i>	<i>g</i> 50c.	\$ 75.00	\$ 100.00	7- 21-08	771
Month. 45.00	Month. 75.00	<i>h</i>	<i>h</i>	<i>g</i> 50c.	500.00	200.00	8- 26-08	772
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7- 24-08	773
60.00	134.00	<i>h</i>	<i>h</i>	<i>g</i> 50c.	336.00	<i>n</i>	7- 19-08	774
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>g</i> \$ 2.50	300.00	<i>n</i>	7- 6-02	775
80.00	110.00	<i>h</i>	<i>h</i>	1.50	<i>n</i>	<i>n</i>	8- 2-05	776
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7- 24-08	777
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7- 24-08	778
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	2 50	100.00	<i>n</i>	8- 24-08	779
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7- 24-08	780
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7- 24-08	781
Month. f \$ 42.00	<i>n</i>	<i>h</i>	<i>h</i>	<i>g</i> 1.25	<i>n</i>	<i>n</i>	10-22-02	782
45.00	Day. 3.25	<i>h</i>	<i>h</i>	<i>g</i> 2.75	450.00	<i>n</i>	8 30-08	783
45.00	<i>n</i>	<i>h</i>	<i>h</i>	<i>g</i> 2.25	2.0.00	<i>n</i>	8-31-08	784
45.00	<i>n</i>	<i>h</i>	<i>h</i>	<i>g</i> 2.50	300.00	\$300.00	12- 8-02	785
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7-24-08	786
Day. 2.00	Day. 3.00	<i>h</i>	<i>h</i>	<i>g</i> .75	<i>n</i>	1,200.00	1- 8-08	787
<i>n</i>	Month. 75.00	<i>h</i>	<i>h</i>	<i>g</i> 2.50	<i>n</i>	100.00	4-12-08	788
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7-24-08	789
Month. 75.00	Month. 90.00	<i>h</i>	<i>h</i>	<i>g</i> 1.50	<i>n</i>	2,400.00	8-22-08	790
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	2.75	<i>n</i>	<i>n</i>	7-24-08	791
Year. 500.00	Year 720.00	<i>h</i>	<i>h</i>	<i>g</i> 2.25	<i>n</i>	<i>n</i>	7- 8-02	792
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7-24-08	793
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7-24-08	794
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>g</i> .50	1,200.00	<i>n</i>	7- 6-02	795
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>g</i> 2.50	<i>n</i>	<i>n</i>	7-20-08	793
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>g</i> .50	65.00	<i>n</i>	7- 8-02	797
<i>n</i>	<i>n</i>	<i>h</i>	<i>h</i>	<i>n</i>	<i>n</i>	<i>n</i>	7-24-08	798

limited" with no extra compensation.

b Wages paid per month provided 5,000 miles 2 cents per mile.*d* Highest wages paid before organization for road service, in yards, 10 hours, 1- paid upon a basis of 10 miles an hour, where hours exceed miles, hours are paid duty 24 hours a day, since organization as well as before.*f* Per month of 2,300 miles. partment assessments have been included, the rates of which are \$2.00 per month for grand and subordinate lodge dues, but do not include special assessments for com- for this local.*z* \$2.00 and \$2.55 per 100 miles schedule prices.*h* Not practical to show

TRADE UNIONS IN
TYPOGRAPHICAL UNION,

Marginal number.	Locality and Number of Union.	Year when organized	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
799	Albia.....	376	1900	10	9	\$ 1.25	\$ 1.62½
800	Boone.....	381	1900	21	10	a .60	1.75
801	Burlington.....	75	1885	80	10	1.75	2.83
802	Cedar Rapids.....	192	1881	70	10	9	1.75
803	Clinton.....	834	1899	25	10	9	1.50
804	Council Bluffs.....	208	1882	81	10-12	1.75	c 2.66
805	Creston.....	537	1902	8	10	1.50	1.50
806	Davenport.....	n 107					
807	Des Moines.....	*113	1882	200	10	1.75	d 2.00
808	Des Moines.....	119	1903	14	n	n	n
809	Dubuque.....	22	1858	44	10-12	9	e 2.50
810	Fort Madison.....	581	1903	10	10	9	1.75
811	Iowa City.....	516	1902	90	10	9	f 1.75
812	Keokuk.....	68	1882	18	10-12	9	1.00
813	Marshalltown.....	414	1902	20	10	9	1.75
814	Mason City.....	406	1900	22	10	9	1.25
815	Muscatine.....	251	1898	28	10	9	1.50
816	Oswaloosa.....	526	1902	15	10	9	1.00
817	Ottumwa.....	73	1884	20	10	9	1.75
818	Stout City.....	180	1879	75	10	1.75	g 2.75
819	Waterloo.....	349	1899	80	10	9	1.00

*Originally organized in 1888, reorganized and affiliated with the national union in 1902. b Before organization; since, it is a flat rate of 25 cents per 1,000 ems. c Per capita dues, machine men's rate \$3.00 per day. d Rate for job printers only, machine operators' printers; machine operators \$8.00 per day for morning papers. e Rate for female \$20.50 per week; night machine operators, \$22.90 per week. f Foremen. g Job

UPHOLSTERERS' INTERNATIONAL

820	Cedar Rapids.....	81	1902	23	10	10	2.00	2.00
821	Des Moines.....	64	1901	41	10	10	2.00	2.00
822	Dubuque.....	87	1903	23	10	10	2.00	2.00
823	Stout City.....	60	1901	15	10	10	2.00	2.00

WOODWORKERS' INTERNATIONAL UNION

824	Burlington.....	200	1902	109	10	10	1.10	1.25
825	Cedar Rapids.....	21	1902	54	10	10	1.50	.....
826	Clinton.....	92	1899	185	10	10	n	n
827	Dubuque.....	64	1898	890	10	10	1.25	1.40
828	Lyons.....	167	1901	73	10	10	n	n
829	Muscatine.....	71	1897	110	10	10	1.00	1.25
830	Muscatine.....	*11	1900	50	10	10	1.35	1.50

* Box sawyers only. n Not reported.

IOWA—TABLE No. 1—CONTINUED.

INTERNATIONAL

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported.	Marginal number.
Before organization.	Since organization.	To minimum rate.	To most skilled.					
\$ 1.06½	\$ 2.33½	6 c.	9 c.	40c.	\$ 5.00		8-18-03	799
1.75	2.66	13½c.	12 c.	50c.			2-26-03	800
	8.16			75c.	108.00		1-18-03	801
2.38	2.75	7½c.	7 c.	60&85c.	75.00	65.00	6-18-03	802
		7½c.		50c.			6-11-03	803
c 2.50	h 5.00	12 c.		b			10-14-02	804
2.75	2.75			40c			8-19-03	805
								806
d 2.25	d 2.66	9½c.	7 c.	b			8- 6-03	807
n	n			75c.			8-19-03	808
	e 2.66						4- 1-03	809
2.25	2.50	12 c.	8 c.	65c.			4- 4-03	810
2.50	2.50			50c.			12-19-02	811
2.00	3.33	14 c.	17 c.	75c.			12- 3-02	812
2.50	3.00	4½c.	8½c.	60c.			3-24-02	813
2.00	2.50	4 c.	8 c.	50c.	5.00		6-10-03	814
		9 c.		85c.			7-29-03	815
2.50	3.00	9½c.	8½c.	75c.			4- 3-03	816
2.00	3.00	10½c.	13½c.	1.25			12- 7-02	817
	h 4.25			b			12-22-02	818
1.75	2.50	12½c.	10½c.	60c.	7.00		7-14-03	819

1892. † News writers' and reporters' union. a Previous to organization girls were discharged and new girls hired; the male printer received 10 to 15 cents per 1,000 ems 1 per cent of earnings per month plus 80 cents. c Minimum rate for job printers only, rate per week \$17.10 for day men, and \$20.10 per week for night men. e Rate for job printers before organization. g Rate for job printers only; day machine operators, printers work 9 hours, machine operators, 8 hours. n Not reported.

UNION OF NORTH AMERICA

				50c.			7-30-03	820
				5 c.			7-30-03	821
				5 c.			7-30-03	822
				50c.			7-30-03	823

OF AMERICA, AMALGAMATED

2.25	2.50	1½c.	2½c.	50c.			7-12-02	824
2.75				40c.			7-11-02	825
n	n			50c.			8- 2-03	826
2.50	3.00	1½c.	5 c.	40c.	75.00		4- 1-03	827
n	n			50c.			7-30-03	828
1.75	2.25	2½c.	5 c.	40c.	25.00		7- 1-02	829
1.65	1.85	1½c.	2 c.	50c.	24.00		12- 7-02	830

NATIONAL ASSOCIATION OF

The officials of this craft association request that they be not classed as a organization is purely educational along craft lines, as the

PREAMBLE.—This association shall at no time be used for the furtherance of strikes, regard to wages; recognizing the identity of interests between employer and employe, between them. Neither shall it be used for political or religious purposes. Its meetings given to the education of engineers, and to securing the enactment of engineers' license mission of steam as a motive power.

ARTICLE I.—Name. SECTION 1. This organization shall be known by the name and the State of New York, February 10, 1893).

ARTICLE II Object. SECTION 1. The chief and primary object of the National and science of steam engineering, and to afford them legal protection when unjustly

Marginal number.	Locality and Number of Union.	Year when organized.	Number of members.	Length of Work Day—Hours—		Minimum Day Wage.	
				Before organization.	Since organization.	Before organization.	Since organization.
1	Boone.....	1	n	.....	.....	n	n
2	Clinton.....	6	n	n	n	n	n
3	Davenport.....	7	n	n	n	n	n
4	Des Moines.....	2	60	10-12	10-12	n	n
5	Dubuque.....	4	1885 28	10-12	10-12	n	n
6	Fort Dodge.....	5	n	n	n	n	n
7	Marshalltown.....	11	n 24	n	n	n	n
8	Sioux City.....	8	n	n	n	n	n
9	Waterloo.....	8	1900 33	12	12	n	n
10	Cedar Rapids.....	10	1902 40	12	12	n	n

Wages for this class of labor ranges from \$35.00 to \$150.00 per month; general aver attending to necessary repairs. n Not reported.

STATIONARY ENGINEERS.

trade union, so that it may be generally understood. The purpose of the following sections of the platform and constitution exhibit:

or for the purpose of interfering in any way between its members and their employers in and not countenancing any project or enterprise that will interfere with perfect harmony shall be devoted to the business of the association, and at all times preference shall be laws in order to prevent the destruction of life and property in the generation and trans-

title of The National Association of Stationary Engineers (incorporated under the laws of

Association of Stationary Engineers shall be the better education of its members in the art assailed by other organizations in their avocation.

Day Wage of Most Skilled.		Wage Gain Per Hour Since Organization.		Per capita dues per month.	Sick benefit paid past year.	Funeral benefit paid past year.	Date union reported	Marginal number.
Before organization.	Since organization.	To minimum rate	To most skilled.					
n	n	.....	.....	35c.	.....	\$ 80.00	11-21-02	1
.....								2
.....								3
.....				35c.	.....	80.00	11-21-02	4
.....				20c.	.....	.....	11-27-02	5
.....								6
.....								7
.....								8
.....				35c.	.....	.....	11-18-02	9
.....							11-18-02	10

age, \$60.00. Hours are 12 per day, as a rule, and often include a large part of Sundays for

TRADE UNIONS IN IOWA—TABLE No. 2.

Summary of the different craft organizations showing total number reporting, total membership, wage rates, length of work-day, average per cent reduction of hours and average per cent increase of wages for each craft since organization.

Local Unions of	Total number in state.	Number reported.	Total membership reported.	Average minimum wage per day.	Average maximum wage per day.	Average length of work-day.	Average per cent reduction of hours since organization.	Average per cent increase of wages since organization.
Bakers and Confectioners, International Journeymen	8	8	220	\$ 1.84	\$ 2.79	10 1/2	12.5	27.00
Barbers, International Union, Journeymen	20	20	570	1.78	2.85	12	6.6	81.00
Bible Believers, International Brotherhood of	16	16	822	2.48	3.23	18 1/2	.02	18.70
Boiler Makers and Iron Ship Builders of America, Brotherhood of	12	12	324	a 8.07 1/2	a 8.23	b 10	.00	a 18.50
Book Binders, International Brotherhood of	7	7	161	b 2.04 1/2	b 8.21	c 9	.00	b 24.27
Boot and Shoe Workers Union	5	5	889	c 2.18	c 2.48	10	.00	.00
Brewery Workers, International Union of United	6	6	107	d 4.10	d 2.46	10	.00	50.00
Bricklayers and Stone Masons International Union	22	22	108	1.63	2.42	8 1/2	12.00	84.56
Brick, Tile and Terra Cotta Workers International Alliance	5	5	60	1.03	1.03	8	10.00	11.64
Broom Makers International Union	6	6	15	1.53	2.46	10	.00	14.18
Car Men, Brotherhood of Railroad	17	17	1,040	1.83	2.46	10	.00	12.73
Car Workers International Association of	4	4	845	2.93	3.89	10	.00	12.73
Carpenters and Joiners of America, United Brotherhood of	27	27	2,870	2.83	3.07	e 9	.00	31.50
Cigar Makers, International Union of America	30	30	872	1.96	3.07	8	10.00	40.61
Clerks, United Association of Post Office	17	17	180	f 1.96	f 3.07	8	20.00	50.00
Clerks, International Association of Retail	30	30	1,590	d	a	d	d	d
Conductors, Order of Railroad	20	20	971	8.00	5.00	10	.00	80.00
Coopers International Union of North America	18	18	193	2.26	2.43	10	.00	13.00
Electrical Workers, International Brotherhood of	14	14	822	2.26	3.23	9	10.00	29.14
Engineers, Brotherhood of Locomotive	25	25	1,440	3.85	4.70	10	.00	50.00
Engineers, International Union of Steam	4	4	150	3.85	2.40	12	.00	50.00
Farmers, Brotherhood of Locomotive	28	28	1,487	2.00	2.75	12	.00	50.00
Farmers, International Brotherhood of Stationary	6	6	882	2.00	2.81	12	.00	16.05
Federal Labor Unions (mixed occupations)	41	41	383	1.90	2.15	12 1/2	8.33	20.00
Freight Handlers and Interior Warehousemen's Union of America	1	1	180	1.90	2.00	10	20.00	28.38
Garnet Workers of America, United	5	5	184	.97 1/2	1.40	9 1/2	10.00	d
Glove Workers Union of America, International	1	1	40	d	d	10	5.00	40.82
Horse Shoers of United States and Canada, International Journeymen	6	6	46	2.37 1/2	2.75	9 1/2	20.00	85.88
Hotel and Restaurant Employees International Alliance and Bartenders	23	23	965	f 10.15	k 14.06	10 1/2	20.00	85.88

Laborers International Protective Union of America.	10	6	7	10	668	1.96	2.16	9	10.00	24.81
Laundry Workers International Union.	6	7	7	10	87	2.96	2.96	81	18.98	81.55
Laundry Workers International Union.	7	7	7	10	215	.96	2.96	91	6.00	20.00
Leather Workers on Horse Goods, United Brotherhood of	10	10	10	10	897	1.96	2.81	10	.00	88.12
Letter Carriers, National Association of	27	27	27	27	234	m 800.00	n 880.00	8	.00	d
Machinists, International Association of	18	18	18	18	1,078	8.00	8.48	0	0	27.11
Meat Cutters and Butcher Workmen of North America, Amalgamated	14	14	14	14	745	1.87	2.65	11	14.06	13.60
Metal Mechanics International Association of Allied	8	2	1	10	75	1.87	2.27	9	10.00	8.27
Metal Workers, International Union of United	2	1	1	10	30	8.00	8.57	9	10.00	71.42
Metal Workers, International Association of	13	9	9	9	154	2.41	2.91	9	10.10	24.23
Mine Managers and Assistants Mutual Aid Association	2	2	2	2	81	2.00	2.60	8	.00	10.23
Mine Workers of America, United	84	84	84	84	12,486	2.86	8.51	8	20.00	85.00
Molders Union of North America, Iron	9	6	6	6	178	2.624	2.85	p 10	.00	24.76
Mill Employes, International Union of	8	2	2	2	190	1.80	8.11	p 11	.00	6.00
Musicians, American Federation of	9	9	9	9	666	d 2.54	d 2.874	d	d	d
Painters, Decorators and Paper Hangers of America, Brotherhood of	22	17	17	17	896	8.90	4.20	84	16.25	29.18
Plasterers, International Association of Operative	9	9	9	9	96					55.65
Plumbers, Gas Fitters, Steam Fitters and Steam Fitters Helpers of Unit d	13	11	11	11	216	8.19	8.44	84	10.52	59.69
States and Canada, United Association of	7	6	6	6	121	2.01	4.16	9	10.00	28.2
Printing Pressmen's Union, International	3	3	3	3	339	45.00	55.00	12	.00	12.51
Railway Expressmen of America, Brotherhood of	8	8	8	8	433	1.33	1.71	12	.00	12.71
Railway Employes of America, Amalgamated Association of Street	2	2	2	2	34	2.124	8.00	84	15.00	88.88
Stenographers and Electrotypers Union of North America, International	9	9	9	9	134	8.73	4.22	9	10.00	40.22
Stonecutters Association, Journeymen	11	s								
Switchmen's Union of North America	18	18	18	18	478	1.97	2.48	10	d	23.12
Tailors Union of America, Journeymen	15	15	15	15	1,369	r 8.83	r 8.83	d	d	28.07
Team Drivers, International Union	9	9	9	9	227	t 4.33	t 78.33	12	.00	30.00
Telegraphers, Order of Railroad	1	1	1	1	120	1.00	1.50	10	.00	.00
Textile Workers of America, United	28	28	28	28	1,888	2.20	2.60	10	d	10.00
Tramway, Brotherhood of Railroad	21	20	20	20	719	2.08	2.97	9	10.00	123.21
Typographical Union, International	4	4	4	4	102	2.00	2.40	10	.00	d
Upholsterers International Union of North America	7	7	7	7	911	1.35	2.40	10	.00	8.87
Wood Workers International Union of America	1	1	1	1	65					
Tractric : Engineers and General Mechanics										
Total for state	830	702	702	702	44,722					

* One local union at Des Moines of 28 members employed in contract shops secured 10 per cent reduction of hours. ^a Includes holler makers unions only and not helpers. ^b Includes male book binders unions only; the other four failed to report wages paid. ^c Represents one union only; the other four failed to report wages paid. ^d Data too irregular to tabulate. ^e One local union at Des Moines of 12 members secured 10 per cent reduction of hours. ^f \$900.00 per year in first-class postoffices, \$500.00 per year in second-class. ^g \$300.00 and \$1,000.00 per year. ^h In first-class offices 8 ho. rs per day, in second-class 10 hours, and sometimes more. ⁱ A few members in the Des Moines and Dubuque organizations have secured a reduction of hours from 12 to 8, but not enough members to warrant a change in average for state. ^j Average minimum rate per week. ^k Average maximum rate per week. ^l Average maximum rate per year. ^m Average minimum rate per year. ⁿ Average maximum rate per year. ^o One local union at Des Moines secured a reduction of hours from 10 to 9 per day for 50 machinists employed in job and contract shops. ^p One local union at Des Moines secured a reduction of hours from 10 to 9 per day. ^q Per month. ^r Including team. ^s No switchmen's unions reported. ^t Rates per month. ⁺ Increase stated here base 1 on minimum rates only.

TRADE UNIONS IN IOWA—TABLE No. 3.

Summary of organizations and membership in localities.

Locality.	Number of unions.	Number of members.	Locality.	Number of unions.	Number of members.
Albia	7	386	Hocking	1	326
Altoona	1	61	Hynes	1	580
Angus	1	25	Independence	1	2
Atlantic	2	7	Iowa City	12	a 225
Beacon	2	110	Iowa Falls	1	34
Belle Plaine	5	226	Jefferson	2	178
Berwick	1	202	Jerome	1	46
Blackbird	1	57	Keb	1	200
Boone	28	a 1,336	Keokuk	19	786
Boonsboro	1	425	Knoxville	8	• 50
Brazil	1	220	Laddedale	1	92
Burlington	83	e 1,223	Lake City	1	52
Bussey	2	300	Lehigh	4	• 252
Buxton	2	1,184	Lost Creek	2	144
Carbondale	1	235	Lucas	2	132
Carroll	2	93	Lvons	8	125
Cedar Falls	1	4	Madrid	1	15
Cedar Rapids	56	m 2,585	Marion	7	• 223
Centerville	18	• 1,045	Marquisville	1	280
Chariton	3	78	Marshalltown	27	• 941
Charles City	1	4	Marysville	1	12
Cherokee	8	146	Mason City	22	a 759
Cincinnati	1	212	Mendota	1	224
Clarkdale	1	25	Milton	1	10
Clarinda	1	18	Missouri Valley	5	142
Cleveland	1	350	Mt. Pleasant	3	14
Clinton	39	e 1,491	Muchakinock	1	183
Coalfield	1	54	Muscatine	16	b 506
Coalville	1	125	Myatie	4	• 602
Colfax	2	296	New Market	1	140
Corydon	2	83	Newton	1	• 48
Council Bluffs	20	• 899	Numa	1	242
Creston	13	478	Oelwein	17	a 613
Davenport	36	f 1,373	Oskaloosa	21	1,013
Dawson	1	27	Oley	1	16
Dean	1	40	Ottumwa	42	b 1,845
Decorah	1	3	Pekay	2	62
Des Moines	71	c 5,748	Pella	2	469
Diamond	2	70	Perry	5	7
Douds	1	12	Quarry	1	102
Dubuque	52	c 2,820	Rathbun	1	14
Dunreath	1	34	Red Oak	1	73
Eagle Grove	5	300	Runnells	1	42
Eddyville	2	65	Sa- born	2	320
Eldon	8	140	Seevers	1	175
Eldora	1	14	Seymour	1	45
Estherville	4	210	Shawville	1	20
Evans	2	210	Shenandoah	1	• 2,201
Eveland	1	87	Sioux City	45	• 25
Exline	1	50	Stuart	1	347
Fairfield	7	• 60	Valley Junction	6	82
Flagler	1	40	Van Meter	1	42
Forbush	1	70	Inton	1	82
Fort Dodge	22	a 1,277	Walsh	1	1,041
Fort Madison	18	a 574	Waterloo	28	a 4
Foster	1	133	Webster City	1	16
Fraser	1	200	West Union	1	217
Frederick	1	24	What Cheer	2	70
Grinnell	1	3	Willard	1	30
Hamilton	1	43	Woodward	1	
Harkes	1	118			
Hilton	1	253			
Hittman	3	• 461			
			Total	830	44,722
			Total number localities, 123		

* Membership of one local not reported.

b Membership of three locals not reported.

c Membership of six locals not reported.

e Membership of ten locals not reported.

a Membership of two locals not reported.

c Membership of four locals not reported.

f Membership of seven locals not reported.

TRADE UNIONS IN IOWA—TABLE No. 4.

Summary showing number of Trade Unions and membership by Counties in 1903.

Counties.	Number of unions.	Number of members.	Counties.	Number of unions.	Number of members.
Adair.....			Johnson.....	12	a 226
Adams.....			Jones.....		
Allamakee.....			Keokuk.....	2	217
Appanoose.....	36	a 3,195	Kossuth.....		
Audubon.....			Lee.....	85	a 1,810
Benton.....	6	235	Linn.....	68	m 2,808
Black Hawk.....	24	a 1,045	Louisia.....		
Boone.....	32	a 2,001	Lucas.....	6	580
Bremer.....			Lyon.....		
Buchanan.....	1	2	Madison.....		
Buena Vista.....			Mahaaska.....	30	• 1,907
Butler.....			Marion.....	12	• 600
Calhoun.....	1	52	Marshall.....	23	• 948
Carroll.....	2	98	Mills.....		
Cass.....	2	7	Mitchel.....		
Cedar.....			Monona.....		
Cerro Gordo.....	22	a 759	Monroe.....	18	• 8,101
Cherokee.....	3	146	Montgomery.....	1	14
Chickasaw.....			Muscatine.....	16	b 506
Clarke.....			O'Brien.....	2	42
Clay.....			Osceola.....		
Clayton.....			Page.....	2	38
Clinton.....	39	e 1,606	Palo Alto.....		
Crawford.....			Plymouth.....		
Dallas.....	8	558	Pocahontas.....		
Davis.....	1	92	Polk.....	82	c 6,946
Decatur.....			Pottawattamie.....	20	• 869
Delaware.....			Poweshiek.....	1	3
Des Moines.....	33	e 1,223	Ringgold.....		
Dickinson.....			Sac.....		
Dubuque.....	52	c 2,820	Scott.....	36	+ 1,878
Emmett.....	4	210	Shelby.....		
Fayette.....	18	a 634	Sioux.....		
Floyd.....	1	4	Story.....		
Franklin.....			Tama.....		
Fremont.....			Taylor.....	1	140
Greene.....	2	173	Union.....	13	478
Grundy.....			Van Buren.....	2	22
Guthrie.....	1	25	Wapello.....	49	b 1,820
Hamilton.....	1	4	Warren.....		
Hancock.....			Washington.....		
Hardin.....	2	48	Wayne.....	8	258
Harrison.....	5	142	Webster.....	27	b 1,654
Henry.....	8	14	Winnebago.....		
Howard.....			Winneshiek.....	1	3
Humboldt.....			Woodbury.....	45	• 2,201
Ida.....			Worth.....		
Iowa.....			Wright.....	5	309
Jackson.....					
Jasper.....	7	• 634	Totals.....	830	44,722
Jefferson.....	7	• 60	Total counties.....	53	

* Membership of one local not reported. a Membership of two locals not reported.
 b Membership of three locals not reported. c Membership of four locals not reported.
 e Membership of six locals not reported. + Membership of seven locals not reported.
 m Membership of eleven locals not reported.

TRADE UNIONS IN IOWA—PART II.

ADVANTAGES GAINED BY TRADE UNIONS IN IOWA WITHOUT STRIKES OR LOCKOUTS.

This question was put on the trade union blank, "What benefits have been secured for your craft through the local organization without resorting to strikes?"

This inquiry was made for several reasons, one was to ascertain whether trade unions kept accurate records so that they would be able to report them and whether they as members of an organization appreciated their own efforts, in some cases this has been clearly expressed but in many others it appears that this important question was either entirely overlooked or it was left to be construed that nothing could be secured without a strike, which is certainly a misconception.

Only a few of the secretaries entered into detail, many replied by merely saying, "Reduction of hours, increase of wages," and some answered the question as "*none*" after demonstrating by the answers to previous questions that they had secured from ten to twenty per cent in reduction of working hours and increases in wages ranging from five to fifty per cent. One secretary of an organization that has never had a strike in Iowa answered the question as "*none*," after demonstrating that the members of his union had increased their average yearly earnings from \$500 to \$720.

However, the importance of this question must not be overlooked, and the answers are given here, as received, for the purpose of stimulating these organizations to make and preserve records and enable them to furnish this department with complete data to inform the public, who rarely have an opportunity to learn what is accomplished by trade unions, in an orderly, reasonable business way and whose attention is only called to the existence of the labor question when some large dispute or strike is in progress in our own or neighboring states.

The replies are as follows:

BARBERS' UNION No. 321, Council Bluffs.—Shorter hours, better shop conditions and better service to the public.

BARBERS' UNION No. 43, Des Moines.—Shorter hours and better wages, If we could secure a law to regulate the proficiency of the art and enforce better sanitary conditions more progress could be made.

BARBERS' UNION No. 349, Muscatine.—Secured half day off on legal holidays; on Labor Day close at 9 A. M. Sunday work totally abolished.

BARBERS' UNION No. 19, Oskaloosa.—If local health officials were empowered to enforce a barber inspection law it would improve conditions for the barbers and the public. Our new price list enables us to make from \$2.00 to \$4.00 more per week.

BLACKSMITHS' UNION No. 16, Clinton.—Through the strikes of boiler-makers our minimum rate was raised from twenty-one to twenty-four cents per hour and the maximum from twenty-eight to thirty-two cents per hour.

BLACKSMITHS' UNION No. 101, Davenport.—Members of the union employed at the United States Arsenal secured a raise of from twenty-five to fifty cents per day, on account of unions forcing the rate of wages 'up among private employers.

BLACKSMITHS' UNION No. 184, Des Moines.—Secured ten per cent reduction in hours and an average of twelve and one-half per cent increase in wages.

BLACKSMITHS' UNION No. 220, Oelwein.—Secured ten per cent increase in wages and protection of committee from indiscriminate discharge.

BLACKSMITHS' UNION No. 162, Ottumwa.—Ten per cent reduction of hours and twenty per cent increase in pay.

BLACKSMITHS' UNION No. 259, What Cheer.—Secured a nine-hour day instead of ten with ten hours' pay and an additional five per cent.

BOILERMAKERS' HELPERS' UNION No. 18, Boone.—More harmony among men and better treatment by subordinate officials. Time and a half for overtime instead of bare hourly rates.

BOILERMAKERS' UNION No. 47, Des Moines.—Ten per cent less hours, and a minimum raise of twenty-five cents per day.

BOILERMAKERS' UNION No. 145, Missouri Valley.—Secured twenty-five cents per day increase in wages.

BOOKBINDERS' UNION No. 84, Cedar Rapids.—Secured a nine-hour day, a minimum rate of \$12.00 per week, recognition of the union, time and quarter for overtime and holidays. A good increase for the women workers who have all joined our union without hesitancy. Less friction with employers.

BOOKBINDERS' UNION No. 93, Davenport.—Secured a nine-hour day. Some of our members raised from \$12.00 to \$16.50 and others from \$15.00 to \$18.00 per week.

BINDERY WOMEN'S UNION No. 98, Davenport.—We gained the nine-hour day and a ten per cent raise of wages in one shop and the ten-hour rate of wages for nine hours in two other shops.

BOOKBINDERS' UNION No. 71, Des Moines.—Secured recognition, increased wages and shorter hours.

BREWERY WORKERS' UNION No. 98, Davenport.—Increased wages and reduction of hours from fourteen to eighteen per day to nine hours.

BRICKLAYERS' UNION No. 11, Boone.—Better harmony between employers and men ten per cent reduction in hours; time and half for overtime and double time for Sundays.

BRICKLAYERS' UNION No. 10, Burlington.—Increased wages, reduced hours, better system in handling our business and better uniformity of prices.

BRICKLAYERS' AND STONE MASONS No. 14, Cedar Rapids.—Shortened the hours from ten to nine, advanced the wages from twenty-two and one-half cents an hour to an average of forty-five cents. Made our homes brighter and have become better and more appreciative citizens realizing that our improved conditions could only be obtained in this glorious country through organization.

BRICKLAYERS' UNION No. 2, Des Moines.—Had one strike in 1882 when we first organized; have had none since. In 1886 reduced our hours from ten to nine per day. In 1893 reduced our hours from nine to eight per day, raised our scale in 1893 four and one-half cents per hour and in 1903 increased it six and one-fourth cents per hour, without strike. Previous to organization the most skilled bricklayer in Des Moines could not make over \$500 per year; now we make \$1,200 per year and still live.

STONE MASONS' UNION No. 22, Des Moines.—Increased our wages \$2.00 per day and shortened our hours twenty per cent; that is all.

BRICKLAYERS' UNION No. 16, Fairfield.—We have benefited ourselves by obtaining a shorter day of nine hours and more pay but the best benefit is the organization brings us closer together and makes us good friends instead of wrangling with each other.

BRICKLAYERS' UNION No. 12, Marshalltown.—Reduction in hours, slight raise in wages and recognition of union.

BRICKLAYERS' UNION No. 23, Oskaloosa.—Have secured same pay for nine hours that we got for ten hours before organization.

BRICKLAYERS' UNION No. 8, Ottumwa.—Instead of ten hours' work for \$2.50 we get \$3.60 for eight hours' minimum rate.

BRICKMAKERS' UNION No. 51, Des Moines.—Unfortunately we were compelled to strike for most of our concessions at the start, but as the spirit of our organization has been better understood our relations with the employer have grown more harmonious. The non-union men received benefits by our organization, getting \$1.50 and \$1.75 for ten hours' work, instead of \$1.35 and \$1.50, while members of our union get \$1.80 for nine hours.

BRICKMAKERS' UNION No. 88, Mason City.—We organized January 5, 1903. Our members were spotted and locked out.*

CARMEN'S UNION No. 193, Boone.—Previous to our organization we were treated very harshly by subordinated officials. Since organization we have been treated with more consideration and respect by these same officials; this alone is worth every effort made by our local union. We have also received a small increase of wages.

CARPENTERS' UNION No. 364, Council Bluffs.—Secured an eight-hour day, raised wages from seventeen and one-half cents and twenty cents an hour to thirty-two and one-half and thirty-five cents an hour.

CARPENTERS' UNION No. 284, Fort Dodge.—We have received an average return of \$5.00 increase of wages per week on an investment of fifty cents per month as dues in the Carpenters' Union.

CARPENTERS' UNION No. 767, Ottumwa.—Secured one hour less per day, an increase of at least twenty-five per cent in wages, and a more brotherly feeling among the members.

CIGAR MAKERS' UNION No. 177, Council Bluffs.—We have maintained our selves and families in a decent manner in spite of the local market being flooded with cigars made in cellars and worse places, by children and persons afflicted with contagious diseases. The benefits we have secured by our blue label are so many and are so continuous that it would not be possible for a cigar maker to live and raise a family without the protection it affords us. We have had no strikes nor do we want any. The more our blue labeled goods are patronized by the public the fewer strikes there will be and the result will be harmony between workmen and the bosses and protection for the public.

CIGAR MAKERS' UNION No. 111, Des Moines.—It is extremely difficult to answer this question in detail for a period of twenty-two years since our organization. The benefits directly the result of organization which are subject to review are many, but it is only fair to state that the evils that would have crept into the trade during the same period were it not for the local and international union would have been by far the greater. The old time-worn maxim, "an ounce of prevention is worth a pound of cure" has certainly been well sustained in our craft.

CIGAR MAKERS' UNION No. 490, Fairfield.—Better sanitary conditions in shop and \$1.00 per thousand increase in bill of prices.

CIGAR MAKERS' UNION No. 270, Mason City.—Our day's labor has been shortened two hours. Wages have been increased from \$8.00 per thousand for hand work to \$8.00 per thousand for mold work. The jobs we were making \$8.00 on now pay \$11.00 which is thirty-seven and one-half per cent increase.

CIGAR MAKERS' UNION No. 495, Marshalltown.—Have secured better wages, shorter hours, and abolished the employment of school children.

CIGAR MAKERS UNION No. 155, Mount Pleasant.—Secured shorter hours, employment of more men, higher and more uniform bill of prices; sick, death and out-of-work benefits.

* This cannot be recorded as an advantage from a commercial standpoint for the brickmakers, but it is necessary to record it as an evidence of the experience of wage earners when organization is first undertaken by them.

CIGAR MAKERS' UNION No. 277, Oskaloosa.—Note our advantages gained without strike by analyzing answers to your statistical inquiries. They show reduction of hours twenty per cent and an increase in bill of prices which nets the minimum average earnings an increase of 116 2-3 per cent. and the most skilled an average increase of 80 per cent. We are strongly opposed to government of labor disputes by the injunction method as recently practiced by the federal judges and favor the prohibition of the employment of children until they have passed the eighth grammar grade.

POSTAL CLERKS' ASSOCIATION No. 191, Dubuque.—Without strike and as a result of natural organization we have obtained an average increase of \$100 per year. By July, 1903, there will be another per capita increase of \$100.

POSTAL CLERKS' ASSOCIATION No. 442, Ottumwa.—Through our national organization we have partially aroused congress to realize our condition. Our salaries are better than a few years ago and our hours are less; still we are the only employes of the government not under the eight-hour schedule; we fail to understand the reason of this discrimination.

RETAIL CLERKS' No. 389, Boone.—We have exercised a good influence on public morals by stopping Sunday trading.

RETAIL CLERKS' No. 749, Oelwein.—Secured earlier closing hours and closed the stores on Sundays and legal holidays.

RETAIL CLERKS' No. 87, Ottumwa.—Secured shorter hours and abolished Sunday work in general merchandise stores. It seems impossible to do this, however, in the grocery stores and meat markets. The bureau should inform the public what small wages are paid to clerks—especially in department stores.

RAILWAY CONDUCTORS No. 58, Cedar Rapids.—We have established a ten-hour day in place of an unlimited number of hours. Raised the minimum from \$50 to \$90 per month and just obtained a twelve per cent increase for passenger conductors and fifteen per cent for freight; besides, abolished double headers except on grades. No strikes.

ELECTRICAL WORKERS No. 55, Des Moines.—Increased our wages, reduced hours and made a better class of mechanics by drawing us closer together. Secured two inspectors for city lights and wiring which has increased our work and provided protection for the public as well as for electrical workers. We have had three strikes but they were for other reasons.

ELECTRICAL WORKERS No. 170, Mason City.—We have obtained \$2.50 for a nine-hour day, instead of \$2.00 for ten hours, which is almost forty per cent increase by the hours.

ENGINEERS LOCOMOTIVE No. 6, Boone.—Secured new schedule with eight per cent increase and minor changes of special rules.

ENGINEERS, LOCOMOTIVE No. 113, Des Moines.—Material increase of wages secured, and improved conditions of nearly every character surrounding our employment.

ENGINEERS; LOCOMOTIVE No. 119, Dubuque.—Increase in wages and better conditions all round. More intelligence and improved efficiency from members as a result of organization.

ENGINEERS, LOCOMOTIVE No. 117, Mason City.—Secured a raise of wages several times; adjusted many minor grievances and obtained the reinstatement of men who have been indiscriminately discharged without an investigation.

ENGINEERS, LOCOMOTIVE No. 203, Perry.—The benefits secured through organization have been innumerable; strikes have not been resorted to at all; wages have been increased from time to time, ranging from twenty to twenty-five per cent all told. Many grievances have been settled by the system committees of our union conferring with the officials representing the company. The long hours in the service is the question which seems to be the hardest to settle.

ENGINEERS, LOCOMOTIVE No. 490, Sioux City.—Increased wages and other concessions have been secured.

FIREMEN, LOCOMOTIVE No. 25, Boone.—Hours of labor have been regulated and in cases where they could not be reduced the pay has been increased at least fifty per cent. Conditions with subordinate officials have been made more tolerable and men are treated with more consideration which was not the case previous to organization when each individual had to depend on his own resources. We find the higher officials become better acquainted with the men as well as the dangers to which they are exposed; this was impossible when the organization was weak or when the men endeavored to adjust their grievances individually.

FIREMEN, LOCOMOTIVE No. 34, Clinton.—Secured at least ten per cent increased wages.

FIREMEN, LOCOMOTIVE No. 106, Dubuque.—Increased wages, improved conditions generally and a higher degree of efficiency among our members which results in better service to the public as well as the employers.

FIREMEN, LOCOMOTIVE No. 351, Centerville.—Shorter hours secured, increase in number of hours for rest between trips and the advantage of fair promotion for senior employes.

FIREMEN LOCOMOTIVE No. 29, Mason City.—The benefits secured have first of all raised the standing of the firemen so that he cannot be discharged without just cause. Wages have been raised from \$1.75 to \$2.20, \$2.50 and \$2.60 per 100 miles, besides being relieved of a great deal of work we formerly did for no extra remuneration. We also get paid at the rate of 10 miles an hour for overtime now.

FIREMEN, LOCOMOTIVE No. 30, Waterloo.—We have been relieved of extra work as to cleaning engines outside of cabs on engines in freight service, and have secured new wage schedules which increased the pay from \$5.00 to \$20.00 per month on some parts of the system. Our hardest problem is the regulation of hours; for the safety of the travelling public as well as ourselves we should not be required to work more than ten or twelve hours in one stretch.

LABORERS' UNION No. 14, Boone.—We have reduced hours from 10 to 9 per day, and increased wages from \$1.50 to \$1.75 per day. Non-union men reap the benefits of our efforts also.

LABORERS' UNION No. 9876, Cherokee.—Have obtained a raise of two and one-half cents an hour—from \$1.25 to \$1.50 per day of 10 hours.

LABORERS UNION No. 7310, Centerville.—Reduced the hours from ten to nine, raised our wages five cents per hour and obtained a *regular* fortnightly pay day.

ICE MEN'S UNION No. 10176, Cedar Rapids.—Reduced hours from fifteen and eighteen per day to fourteen hours, also increased wages from \$10.00 and \$12.00 per week to \$15.00.

LABORERS' UNION No. 8227, Ottumwa.—The first year we were organized secured an increase in wages. Second year obtained the nine hour day at the ten hour rate of pay and time and one-half for overtime. No strike.

LABORERS' UNION No. 8464, Council Bluffs.—Two years ago we secured an eight hour day from the city in place of ten hours at the same rate per day, \$1.50.

TELEPHONE OPERATORS No. 9887, Des Moines.—Sorry to say we had to strike before any attention was paid to our modest requests.

LABORERS' UNION No. 9713, Dubuque.—We enclose a list of our 100 members showing increase in wages obtained for each, averaging twelve and one-half per cent.

LABORERS' UNION No. 9626, Waterloo.—Obtained a ten per cent increase in wages in 1903 without strike.

GAS WORKERS' UNION No. 11057, Des Moines.—Soon as we organized the company granted us a nine hour day without any effort on our part.

LABORERS' UNION No. 8799, What Cheer.—The first year obtained nine hour day at ten hours' pay and the next year an advance of five and ten cents per hour.

GARMENT WORKERS' UNION No. 160, Dubuque.—Obtained shorter hours, better sanitary rules, an increase of twenty per cent in wages and limited child labor under fifteen years.

GARMENT WORKERS' UNION No. 76, Oskaloosa.—Greater harmony and pleasanter relations among employees and with employers.

GARMENT WORKERS' UNION No. 148, Ottumwa.—More wages, less hours and better treatment.

HORSE SHOERS' UNION No. 48, Des Moines.—First we have educated ourselves to a point where we can control the vital interests of our business; second, we succeeded in organizing our employers and placed prices in city on a uniform basis, thereby removing unequal competition on prices and giving skill and good service to the public, the chief factor; third, reducing hours from ten to nine per day, increased wages from fifty cents to \$1.00 per day, making an addition of \$150.00 to \$300.00 to the annual income of a journeyman horseshoer on an investment of \$6.00 per year dues, which shows a percentage profit ranging from 2400 to 4900 per cent. No strike.

COOKS' UNION No. 310, Des Moines.—Have reduced hours from twelve, fourteen and sixteen per day to a limit of eleven hours, increased wages from \$5.00 to \$11.00 per week as the minimum for second cooks and for the head cooks from \$9.00 to \$16.00 as the minimum rate. The sanitary con-

ditions surrounding cooks are very bad and injuriously affects the public as well as the cooks. We ask for an investigation and why the same relief is not afforded us as is given to manufacturing concerns. Would like an expression from the Bureau on this matter.

NOTE BY COMMISSIONER—The request for an investigation as to the sanitary conditions surrounding the employment of cooks and where food is prepared for the public, is certainly very necessary and a proper request. The commissioner would be glad to make a thorough and complete inspection of all such places in the state, and is well aware of the great need for same, but the investigations and inspections which were possible with the present working force were necessarily limited, and were made in connection with the collection of statistics with the idea of combining both efforts to the best advantage, and without particular regard to the interests of any special occupation.

It will be impossible to make such a complete inspection as required with the present working force in the bureau, or before additional help is provided.

The law divides the responsibility for attention to these duties among the mayors and chiefs of police of cities, as well as the commissioner, to enforce the provision of the section looking to sanitary conditions where laborers and other persons are assembled in factories or buildings.

LEATHER WORKERS' UNION No. 11, Davenport.—Organization secures more respect for us, we are regarded now like men instead of conveniences. We have secured 25 cents a day increase for men working by the day and an increase of ten per cent on the piece work prices.

LETTER CARRIERS No. 506, Davenport.—Organization gains for us more respect from officials, better harmony among men, more liberal interpretation of rules and better service for the people.

MACHINISTS' UNION No. 283, Clinton.—Have secured several increases in wages from twenty-six cents an hour in 1899 to thirty-four cents an hour in 1903, better regulation of apprentices, overtime Sundays and holiday rates established. General conditions better.

MACHINISTS' UNION No. 254, Des Moines.—In 1901 the nine-hour day was secured for machinists in contract shops without strike; wages were increased on an average of twelve and one-half per cent, affecting 150 men in our own and other trades connecting occupations. In 1902 and 1903 wages were increased for machinists in railroad shops from seventeen to twenty-two per cent, besides other conditions being improved and regulated. Other benefits secured for the craft through organization without strikes are, first, the value of association while away from the shop and the environment of discipline where the presence of employers and foremen and the necessity of close attention to business makes conversation and the interchange of ideas impracticable. This association in union meetings where freedom of discussion is encouraged repays in value many times the cost of the annual dues. If this were the only feature of a trade union it would be a commendable one and in the case of the machinist craft it is especially noticeable because the occupation demands close individual application where association while at work is not so necessary as in many other lines of work and the art of conversation is not forcibly required, but rather close attention, observation and repetition. Habits formed under such peculiar conditions during the hours of the day while the human faculties are the most active had the effect of making machinists of a generation ago while in an unorganized condition, appear like silent automatons, gloomy, taciturn, and non-communicative. The

results of these causes depressed the mechanic, made him non-assertive, reduced his value as a citizen and left him to the mercy of conditions which were ever changing and ignored him as a factor without any consideration; as a consequence working conditions became more severe, competition between employees and employers demanded more and more product and lower remuneration both to employer and employe, and the intricate difficult work of machine construction rapidly descended, in the scale of attraction, from the position of highest rank where merit and requirements should and would naturally place it, to an unenviable position down the scale of allurements, so that many crafts of an absolutely non-skilled character, but which were wholly or partially organized, commanded better wages, less hours, and more considerate treatment. This condition of affairs and the continuation of the absurd policy to "Let well enough alone," finally arrested the earnest attention of the more skilled machinists who became convinced that to let things alone and neglect personal interests of a material character proved that such indifference was wrong and even if the machinists let conditions alone, and unobserved, the conditions did not allow the machinists to remain undisturbed; it became painfully evident that wages constantly grew less and conditions more irksome whether in times of prosperity or depression. The machinist who possessed the highest grade of efficiency and who was inclined to the most steady and thrifty habits saw that his standing was lowered in proportion as the less thrifty, the more intemperate, and the least efficient machinist, was taken advantage of. In 1888 the machinists of the United States resolved to organize and held meetings to discuss their interests; from that time to the present their conditions have gradually improved. The value of association and discussion in the union which affords wage earners an opportunity to study and express their thoughts proves its adaptability and necessity. The trade union is in substance a high school or university for the workingman and by its open forums the machinists have been enabled to develop latent powers not formerly supposed to exist with this class of mechanics. The results are so manifest that no body of men are more surprised than the machinists themselves. Able, forceful writers have graduated from their ranks; earnest and enthusiastic speakers grace many platforms, reasoners and inventors have been stimulated and the very fact that American machinery and American products today constitute the "great American peril" to the effete nations of Europe echoes in voluminous praise the conquests of rapid and economical production made possible by the American machinist who was aroused from his lethargy through the forces of freer activity made possible by means of organization. Other benefits secured for the craft by means of organization without resorting to strikes, may be enumerated under the head of "Greater freedom of expression without fear of losing one's job." "The right of representation to the man of humble mien or docile and quiet habits." Safety and security from discrimination "either on account of nationality, politics, creed or union affiliation." "Shorter hours," "increased pay," "more leisure," "public recognition," "regulation of the number of apprentices," by this means assuring the American boy that when he consents to devote

his early years at a small rate of compensation that he shall be given a guarantee that an efficient knowledge of the craft shall be his privilege and to secure a remunerative wage after his apprenticeship has been served. Last, and not least, the man in years is protected and not as formerly permitted to be thrown out on the scrap heap because his hair may be tinged with silver or his eyes need spectacles at a time of life when he would fail to attract a new employer and when it would be impossible for him to adapt himself to another avocation. These observations, Mr. Commissioner, may be more verbose than your space will permit, but still your very pertinent question is only half answered. Suffice it to say the machinists of Des Moines and the State of Iowa will highly appreciate your 21st question on the trade union schedule.

MACHINISTS' UNION No. 379, Dubuque.—Gained a substantial raise in wages, adjustment of the apprentice question, time and half for overtime, Sundays and legal holidays.

MACHINISTS' UNION No. 299, Marshalltown.—Secured a nine per cent raise in wages in 1903 without strike.

MACHINISTS' UNION No. 171, Missouri Valley.—Twenty-five cents a day increase in 1902 and more in 1903 through committee conferring with officials. There is also a great difference in our treatment. We can now go to the officials of railroads and discuss matters pertaining to our craft and receive respectful consideration with the invitation to "come again, boys; glad to see you." If the Bureau would furnish accurate statistics showing net earnings of corporations and place them within reach of the trade unions, the wage adjustment committees of machinists and other railroad employees would be greatly assisted.

MACHINISTS' UNION No. 116, Muscatine.—Secured fifteen per cent in one shop and twenty-five per cent in another, giving us a minimum of \$2.50 per day. All our demands have been met by employers in a whole-souled, pleasant manner. No strikes occur under such conditions. Our apprentices are protected and their number regulated, proper compensation allowed for overtime, Sundays and legal holidays.

MACHINISTS' UNION No. 290, Oelwein.—Had no strike since 1901, have received eighteen per cent increase in wages, with better shop conditions, better foremen, better treatment and better protection for apprentices; as a consequence we are rendering more efficient service.

MACHINISTS' UNION No. 178, Sioux City.—Never indulged in strikes; without them we have—since 1900—secured over twenty per cent increased wages, or an average annual increase per capita of \$180.00, counting 300 working days per year as a minimum; this nets us 1900 per cent profit on an annual investment of \$9.00 for dues. In addition we have a good working agreement regulating the number of, and affording protection to, our apprentice boys; time and half is allowed for overtime, Sundays and legal holidays and in case of slack business time will be reduced instead of working force.

MACHINISTS' UNION No. 314, Waterloo.—We have no desire to strike. We have been moderately successful without them; since 1899 have secured a per capita increase of sixty-five cents a day, recognition of com-

mittees, regulation of apprentices and more satisfactory working conditions. The worst complaint we have which we wish the Bureau would make public, is that the subordinate officials of a railroad company sometimes cause unnecessary friction and annoyance by repeatedly trying to abrogate agreements made between the higher officials of the company and the representative committees of the employees. This should be stopped.

BUTCHERS' WORKMEN UNION No. 144, Ottumwa.—Since this local was organized the men have received a voluntary raise of twenty-five to fifty cents a day from the employers, besides many improved conditions especially to the more skilled workmen, as this relief and advantage was not given until after organization was effected, the moral influence is obvious. Employees in retail markets have secured Sunday closing and 6:30 p. m. closing work days; formerly they worked a half day on the Sabbath and up to 9 and 10 o'clock p. m. week days.

SHEET METAL WORKERS' UNION No. 51, Sioux City.—We have raised the minimum rate of pay from \$2.00 for a ten hour day to \$2.70 for a nine hour day; this is a raise of ten cents an hour or fifty per cent. We have put into a life's savings bank an equivalent of 300 hours per year on a basis of one hour per day for 300 working days; this practically gives us a month's vacation per year not only with full pay but an actual increase over what we got for the whole year on a ten hour basis. This short story tells what trades unions may do for a portion of society without resorting to strikes. The amount of comfort and happiness secured for us is beyond a dollar and cent calculation.

MINE MANAGERS No. 20-21, Mystic and Centerville.—Our wages have been increased and the members are being educated along technical and sanitary lines in the mines so as to reduce accidents to a minimum, reduce the cost of production and increase the efficiency of mine foremen.

MINERS LOCAL UNIONS IN STATE.

The following is a summary of all the answers from the miners unions instead of giving each separately.

We have secured shorter hours of labor by twenty per cent. Increased our day labor inside the mines an average of fifty-five per cent on the hourly basis, and for day labor, on the outside, an average increase of sixty-five per cent on the hourly basis; on the tonage basis a satisfactory increase approximating twenty per cent and which remains stable for a year, instead of being subject to sudden and arbitrary changes during the season as was customary before the miners or operators were organized. We have also secured the bi-monthly pay day, decreased the cost of mine supplies and obtained better sanitary and safety legislation with improved enforcement. We can report non-compliance or evasions of the law to the mine inspectors now without fear of being discharged and we can make our individual purchases where we choose instead of at the company store without being discriminated against. Better harmony exists among ourselves and between the miner and operator, we are becoming more studious, thoughtful and thrifty, which makes our members more useful and valuable citizens. We maintain check weighmen ourselves which assures us of a fair proportion of the coal we dig and co-operate with the operator in the maintainance of shot examiners and shot firers which guarantees us a larger measure of safety. We have abolished the annoyance of local strikes and stoppages by having such grievances settled by our local pit committees with foremen or the district board with management. We believe our investment in a trade union has been profitable to the miner, the operator and the public. We have not obtained all that we want or that we consider is needed, but if such things can be finally obtained in a reasonable way it will be far preferable to striking for it. It may be an item of interest to the people of Iowa to know to what extent they contributed to the struggle of the anthracite mine workers in Pennsylvania versus the operators. The total amunted to \$226,372.00, of which sympathetic friends gave \$3,358 and members of District 13 by assessment and donation \$223,014.00.

MUSICIANS' UNION, No. 67, Davenport.—Greater harmony obtained through organization; uniform prices, good system established and guaranteed fair dealing, all of which influence and stimulate cultivation of the art of music, and correspondingly benefits the musician.

PAINTERS' UNION No. 199, Davenport.—Obtained an eight hour day in place of ten and increased the rate per hour from twenty-two and a half to thirty-seven and a half cents or a little over sixty-eight per cent.

PAINTERS' UNION No. 246, Des Moines.—Secured an eight hour day and additional remuneration for overtime and Sundays; the rate is double time as a consequence. We are enabled to enjoy more Sundays at home. Before organization all such work was paid as straight time. Strikes were necessary in a few establishments, but not in the majority.

PAINTERS' UNION No. 214, Sioux City.—Reduced the hours from ten to eight per day; increased the minimum rate from twenty-five to thirty-seven and a half per hour. No strike to obtain it.

PLASTERERS' UNION Nos. 21 and 145, Des Moines and Dubuque.—We have no cause for strikes. We arrange our affairs so there is always a demand, then we get what we ask for. We have succeeded in reducing hours from ten to eight and raising our pay from \$2.50 and \$3.00 per day of ten hours to \$4.00 and up to \$6.00 for eight hours. No strikes.

PLASTERERS' UNION No. 235, Iowa City.—Have scarcely been organized a year; reduced hours from ten to eight per day; raised wages from \$3.00 to \$4.00 per day.

PLUMBERS' UNION No. 66, Dubuque.—Wages ranging from \$1.75 to \$3.00 per day of ten hours when we organized; we now have a minimum scale of \$3.50 for eight hours, which has been obtained without strikes.

PLUMBERS' UNION No. 18, Sioux City.—No benefits gained without strikes.

PLUMBERS' UNION No. 304, Waterloo.—No benefits secured without strikes. It was necessary to show our power by striking; all efforts for conciliation and a working agreement were spurned and treated with contempt by our employers, since we are apparently treated with more respect.

PRINTING PRESSMEN'S UNION No. 96, Ottumwa.—General increase in wages, and reduction of hours. Better conditions of employment and a more friendly feeling between employers and employes.

STEREOTYPERS' UNION No. 41, Sioux City.—Reduction of hours from ten to nine per day with twelve and a half per cent increase of wages and regulation of number of apprentices.

TAILORS' UNION No. 116, Marshalltown.—Increase in bill of prices amounting to about \$1.00 to a suit in our favor.

TAILORS' UNION No. 63, Ottumwa.—Uniform scale secured and all work performed in free shops furnished by employers. Night work is reduced by this system which is very beneficial.

DELIVERY DRIVERS' UNION No 172, Centerville.—Secured an increase of ten and fifteen per cent in wages.

TEAM DRIVERS' UNION No. 90, Des Moines.—Our members show a marked development since organization, socially, morally and industrially. They are more harmonious with each other, more self-respecting and self-reliant. We have materially benefited our condition without strikes by reducing the hours from ten to nine and in a few cases to eight per day and increased our pay from \$2.00 and less per day to \$3.50 per day. Our teams are also the better for our organization. We have had a number of small strikes but they have taken place over technicalities and details. Some of

our men who work by the ton or piece work can earn as high as \$4.50 a day at times; this includes the team.

TEAM DRIVERS' UNION No. 192, Keokuk.—Secured an increase of fifty cents per day; those hauling by the tonnage or piece work method an increase of one and a quarter cents a bushel.

TEAM DRIVERS' UNION No. 517, Ottumwa.—Secured an advance in wages of ten per cent and a nine hour day where practicable.

TRAINMEN'S UNION No. 56, Cedar Rapids.—Better conditions generally; standard railroad pay; ten-hour days; recognition of organization as representing the men employed on this system. Pay for overtime; after ten hours or 100 miles have been run in one day we get paid at the rate of twenty cents an hour if hours exceed miles, if not, the rate of two cents a mile.

TRAINMEN'S UNIONS Nos. 60 and 581, Dubuque.—Secured an average increase of twenty-five per cent in wage; better conditions generally; greater efficiency and better service to public by the employes. No strike.

TRAINMEN'S UNION No. 138, Eagle Grove.—A greater degree of justice has been secured from the officials for our members. Men have been reinstated who were unjustly suspended or discharged. Wages and conditions of employment have been materially improved.

TRAINMEN'S UNION No. 352, Estherville.—Better wages, better regulation of hours, remuneration for overtime, and more satisfactory conditions prevailing through efforts conducted by organization.

TRAINMEN'S UNION No. 9, Mason City.—Nothing of any importance.*

TRAINMEN'S UNIONS No. 86, Perry; No. 247, Sioux City, and No. 546, Valley Junction.—We have secured new wage schedules granting increased wages, from twelve to twenty-five per cent reduction of number of cars, limitation of double-headers, privileges of tying up on road for rest when out sixteen hours, and promotion of oldest employes if ability warranted. All these things mean a great deal to the comfort, well being and efficiency of a trainman whose duties are exacting under all conditions.

PRINTERS' UNION No. 192, Cedar Rapids.—The ten hour day was reduced to nine hours and scale increased from \$12.00 to \$13.50 per week.

PRINTERS' UNION No. 203, Council Bluffs.—Greater harmony among men with employers; increased production and a better quality of work which stimulates a demand for product. Shorter hours, increased pay, more considerate treatment; smaller proportion of apprentices with better attention given them who are apprenticed so they learn the craft thoroughly. Equal pay for equal service with no discrimination between males or females. Credit must be accorded organization for averting many strikes which would otherwise occur through dissatisfaction among men having no intelligent means to consider their grievances and obtain satisfactory adjustments.

PRINTERS' UNION No. 118, Des Moines.—Increased wages secured and shorter work hours with better office regulations.

*No strike has been reported from this organization, and on schedule in reply to wages it is reported that the highest wage earned previous to organization was \$500.00 per annum and since the amount earned was \$720.00 per annum.

PRINTERS' UNION No. 22, Dubuque.—Our wages are higher and the hours shorter; more heads of families are employed with fewer apprentices; conditions are better and more satisfactory than if we were not organized. No record of strikes; this local was organized in 1858.

PRINTERS' UNIONS No. 581, No. 515, No. 68, No. 414, No. 406, No. 526, No. 73, No. 349 at Fort Madison, Iowa City, Keokuk, Marshalltown, Mason City, Oskaloosa, Ottumwa and Waterloo.—All report increased wages, reduced hours, better relations existing among men and with employers; better service, more reliable men and more confidence reposed in employees by employers (strikes in but one establishment at Waterloo).

PRINTERS' UNION No. 180, Sioux City.—A shorter work day for machine and job men and on June 1, 1903, to December 1, 1903, job men will work fifty-one hours per week instead of fifty-four. From December 1, 1903, to June 1, 1904, the hours will be 49½ per week. After June 1, 1904, the work day will be eight hours for job men. Wages have been materially increased since organization. All changes made in schedules effected by mutual conference between employers and committees representing employees.

SUPPLEMENTARY.

CARRIAGE AND WAGON WORKERS' UNION No. 90, Des Moines.—Secured a nine hour day with ten hour rate of pay in all shops of city but one where an insignificant strike ensued, but was soon settled.

CARMEN'S UNION No. 110, Marshalltown.—Secured one general raise in July, 1902, of five to twenty cents per hour according to grade of work. In July, 1903 one-half the members received another raise of five to ten cents per hour. No strikes.

CARPENTERS' UNION No. 948, Sioux City.—Through co-operation with building trades council and the recognized working card we have obtained better wages, steadier employment and shorter hours.

CARPENTER MILLMEN'S UNION No. 425, Des Moines.—In addition to securing ten per cent less hours and forty per cent more wages we have obtained time and one-half for overtime and double time for Sundays, thereby allowing us better opportunities to observe the Sabbath.

CEREAL MILL EMPLOYES' UNION No. 16, Cedar Rapids.—A flat increase of ten cents per day has been obtained. If a strict child-labor law was enacted and enforced it would be beneficial to the children and the community.

CEREAL MILL EMPLOYES' UNION No. 20, Cedar Rapids.—We have secured an increase of from five to twenty per cent since organization. No strike. (This organization is composed exclusively of females.)

COOPERS' UNION No. 82, Des Moines.—During the past year secured an increase of twenty-five per cent without strike. Convict labor severely injures our trade; such a system should be abolished.

LOCOMOTIVE FIREMEN LODGE No. 112, Sioux City.—Secured raise of wages several times; increase in number of hours for rest between trips;

reduction in amount of work formerly done for no compensation, and better ice coolers and drinking water furnished during summer months.

MINE WORKERS' UNION No. 991, Angus.—Obtained fifteen cents per ton more for mining and fifty-six cents more per day of eight hours for day labor in mines. We have steadier employment and better harmony among ourselves and with our employers. Our men read and think more seriously on labor and other public questions and show more spirit and independence. Miners and employers are on a higher level of equality and regard each other with more respect. Miners are far more thrifty and temperate and are better home-builders, from these moral results alone our miners' union has been a grand investment. We now need to elect mine inspectors instead of having them appointed. Every mine should be rigidly inspected once a month and the laws of safety better enforced to secure our health and lives.

PRINTERS' UNION No. 251, Muscatine.—Thirty-three and one-third per cent cent increase in wages and a day of nine hours instead of ten secured. No strike.

STEREOTYPERS' UNION No. 40, Des Moines.—An increase of \$1.00 per day and a reduction of hours from ten to eight per day, in fact we are a hundred and twenty-five per cent better off, basing our increase on hourly rates before and since organization.

TELEGRAPHERS' UNION No. 114, Perry.—Secured an average of \$5.00 per month per capita for 200 members of our organization and 1,400 agents and operators employed by the Chicago, Milwaukee & St. Paul railway system. Formerly we worked twelve hours and over for a day's work and received no extra compensation for overtime; we now have a standard day of eleven hours and receive twenty-five cents an hour for overtime.

TELEGRAPHERS' UNION No. 115, Cedar Rapids.—Secured fifteen per cent increase in wages and eight per cent reduction of hours with compensation for time worked over eleven hours per day at the rate of twenty-five cents per hour.

TRAINMEN'S BROTHERHOOD OF RAILROAD UNION No. 104, Centerville.—Secured twelve per cent increase in wages for passenger men and fifteen per cent increase for freight men with other concessions in working rules. Overtime will now be paid for at the rate of twenty-three and thirty-four cents an hour respectively for train men and conductors. Strikes are something we do not wish to indulge in nor will we countenance them until other fair means fail. Laws should be enacted making it a criminal misdemeanor punishable by heavy fine for every double-header train run through the state. The maximum number of cars handled in one train should be limited to thirty cars loaded or empty. Two brakemen cannot safely tend more than this number. A train of this size is less liable to break in two and can be more readily side-tracked from danger of interfering with fast passenger trains.

WAGE SCALES AND TRADE AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES IN IOWA.

This section of the chapter relating to trade unions in Iowa comprises copies of sixty-seven agreements made by thirty-eight crafts and including the affiliated divisions and sub-divisions of the several occupations together with sample agreements of a national character all of which is considered valuable material to be officially recorded in compliance with the duties outlined in section 2470 of the Code instructing the Commissioner, "to collect, assort and present in his reports details relating to all departments of labor in the state, especially in its relation to the commercial and sanitary conditions of the laboring class."

These agreements do not include by any means all such agreements existing in the state but are some of the most important ones that affect the largest number of employees and employers, they have been selected as partial evidence of the business understanding existing between employers and employees in Iowa.

No better tribute to the general character of the feeling on matters dealing with capital and labor in this state can be recorded than the recent public utterance of Mr. Charles H. Morris, president of the Coal Operators' Association of Iowa, which is herein quoted:

COAL CONFERENCE IS COMPLETED.

ONLY MINOR MATTERS, LITTLE GRIEVANCES OF INDIVIDUALS, WERE CONSIDERED.

DES MOINES, September 19th, 1903.

The conference between representatives of the Iowa Coal Operators' Association and the United Mine Workers were continued yesterday morning at the Kirkwood. The business of the conference was almost completed at the meeting Thursday, so nearly so that some of the out-of-town members got away that night.

"There really was no use of holding the meeting today," said Charles H. Morris, president of the Operators' Association, last night. "We did

nothing of any importance. Only a few minor matters, little grievances of individuals, were all that came before us today; and the most of these we sent back to the local officers to settle. The plan of having a commissioner of the operators to confer with the president of the union for the purpose of settling all disputes is working admirably. Both parties show a desire to do the reasonable thing. We want to treat all the men fairly, and they seem to be ready to deal fairly with us. If a man is discharged, and it can be shown that the discharge was undeserved, the operators pay the man for his lost time and re-instate him. We are glad to do it. On the other hand, when a man is discharged for good cause there is no disposition on the part of the miners to resent the act. Affairs are moving so smoothly between the miners and operators that it will not be necessary to have another conference this year. We have had but one other since the first of January, and I believe that all would have gone very well if we had not had this one, but it promotes good feeling to get together now and then and talk things over."

AMERICAN FEDERATION OF LABOR.

HEADQUARTERS: 423-425 G. ST. N. W., WASHINGTON, D. C.

SAMPLE AGREEMENT GOVERNING THE USE OF THE AMERICAN FEDERATION OF LABOR UNION LABEL.

1. To entitle an employer to the use of the American Federation of Labor union label, all employees must be members of unions affiliated with the American Federation of Labor.
2. The hours of labor of employees shall not be more than per day; the hours to be set by the union and approved by the President of the American Federation of Labor.
3. The scale of prices adopted by the union shall be paid by the employer.
4. The union rules shall be faithfully enforced by the employer.
5. The employer shall not receive from the union more labels than are sufficient to cover the product for the ensuing week.
6. The employer shall agree that should he, at any time, violate the rules under which the label is issued to him, he will not use any more of the union labels, but will surrender them to the union, or officer of the union, from whose hands he received them.
7. The employer will not himself, nor permit any one for him, or in his behalf, have the label of the American Federation of Labor imitated, duplicated, or counterfeited in any way whatsoever.
8. That should the employer desire to discontinue the use of the label he shall give one week's notice of the same to the duly authorized and accredited officer or representative of the union from whose hands he received the label.
9. That it is the purpose of the employer, as well as the union, to faithfully carry out the above provisions in letter as well as in spirit.
10. That this agreement shall be binding for a period of from date, or longer unless terminated in accordance with the notice herein provided.

Signed this day of, 190..

Signature of employer

..... Union, No.

Business

..... President.

City

State

BAKERS—DUBUQUE.

AGREEMENT BETWEEN BOSS BAKERS OF DUBUQUE, IOWA, AND THE JOURNEYMEN BAKERS' AND CONFECTIONERS' INTER- NATIONAL UNION, LOCAL NO. 302.

DUBUQUE, IOWA, June 24, 1903.

1. Contract entered into between boss bakers of Dubuque, Iowa, parties of the first part, and the Journeymen Bakers' and Confectioners' International Union, No. 302, of Dubuque, Iowa, parties of the second part. This contract to run for one year from July 11, 1903, to July 11, 1904.

2. The boss bakers agree to recognize the said union. In consideration they are to have use of the union label on all goods. The same to be furnished by the local union to the boss bakers at cost of printing.

3. They, the boss bakers, agree to hire none but union men, except when none are to be had. Then said men must make application to said union in one week.

4. The wage scale to be as follows: The foreman in a shop that employs three or more men to receive \$16.00 to \$18.00 per week. Second hand to receive \$14.00 per week. Bench hands to receive \$12.00 per week. In a shop that employs from one to two men, head man to receive \$14.00 to \$15.00 per week.

5. Ten hours to constitute a day's work. Straight time for all overtime

6. Not more than one apprentice shall be allowed for each shift of men.

....., President.

....., Secretary.

....., Proprietor.

BARBERS—BOONE, IOWA.

SCALE OF PRICES—Hair cut, 25 cents; shampoo, 25 cents; head shave, 10 cents; ladies' shampoo, 50 cents; singe, 25 cents; massage, 25 cents; razor honing, 25 cents; shave, 10 cents; sea foam, 10 cents; tonic, 10 cents; beard trim, 10 cents; neck shave, 5 cents; hot towels, 5 cents.

SCHEDULE OF WAGES—Schedule of wages for members of this union shall be as follows: \$10.00 guaranteed per week, and 60 per cent over \$16.66. Journeymen not working on full time 60 per cent straight.

BLACKSMITHS', TOOLMAKERS' AND EMPLOYERS' SCALE AND AGREEMENT AT WHAT CHEER, IOWA.

April 1, 1903.

This agreement entered into and between the firms below mentioned and the International Brotherhood of Blacksmiths, Local Union No. 259.

Nine hours shall constitute a day's work.

That in consideration of being allowed to use the toolmakers "label" of the International Brotherhood of Blacksmiths the said firm agrees to operate a union factory from the first of April, 1903, to the first of April, 1904, subject to the following conditions:

That all eligible employees shall be members in good standing in the International Brotherhood of Blacksmiths, all other employees shall belong to some bona fide labor organization.

That their factory shall be kept in as clean and healthy condition as the nature of the work will permit of.

Any differences that may arise between the firm and their employees shall be, if possible, adjusted between the firm and the shop committee appointed by the union, if they fail to agree, the dispute shall be submitted to a disinterested third party.

Agreed upon by mutual consent and whose decision shall be final and binding upon both parties.

Employes shall remain at work during the time consumed by such arbitration, and all final decisions on matters of dispute shall be rendered within fifteen days, after being placed in the committee's hand

No employes shall be dismissed without reasonable and just cause for same.

Time and one-half shall be paid for all work over the regular nine hour day, Sundays and legal holidays.

In no case shall a man over twenty-one years of age start for less than \$1.50 per day.

Labels will be supplied at the uniform rate of fifty cents per thousand in sufficient numbers to cover the output of the factory, and no more.

Labels must be applied to the goods before leaving the factory only, and shall at no time nor under any circumstances be supplied to agents or other persons, either directly or indirectly.

Violations of this section shall immediately render this contract invalid.

The International Brotherhood of Blacksmiths will at all times protect its labels against infringement or use by unauthorized parties whatever.

The following wage schedule shall be the minimum rates:

Lathe men, capable of doing a little machine work.....	\$2.00 per day.
Thread cutters	1.75 per day.
Day laborers	1.50 per day.
Handy men	1.75 per day.
General blacksmith and pick maker	2.50 per day.
Blacksmiths' helpers	1.75 per day.
Engineer	2.10 per day.

P. H. Leonard, President.

H. P. Thompson, Recording Secretary.

Star Mfg. Co.,

Samuel, President.

American Mining Tool Co.,

What Cheer Tool Co.,

William Thompson, President.

William Doller, Secretary.

BOOKBINDERS— CEDAR RAPIDS.

None but members of the International Brotherhood of Bookbinders shall be employed. Fifty-four hours constitutes a week's work.

RATE OF WAGES AS FOLLOWS:

Foremen, not less than \$18.00 per week.

First-class rulers, finishers and forwarders, \$15.00 per week.

Second class rulers, finishers and forwarders, \$12.00 per week.

Overtime and Decoration day, Fourth of July, Labor day, Thanksgiving and Christmas, time and one-fourth.

Apprentices to serve five years, one apprentice allowed to every three journeymen.

Apprentice scale of wages of bookbinders at Cedar Rapids:

First year, \$3.00 per week.

Second year, \$4.00 per week.

Third year, \$5.50 per week.

Fourth year, \$7.00 per week.

Fifth year, \$9.00 per week.

The above agreement was signed by employers of bookbinders at Cedar Rapids for three years from November 21, 1901.

BOOKBINDERS (MEN)—DES MOINES.

INTERNATIONAL BROTHERHOOD OF BOOKBINDERS. SCALE OF DES MOINES LOCAL NO. 71.

First forwarders, \$14.50 per week; second forwarders, \$13.50 per week; first rulers, \$15.00 per week; second rulers, \$13.00 per week; finishers, \$15.00 per week; foremen, \$17.00 per week; cutters, \$11.00 per week.

Above scale was in force for one year from December 17, 1900. For three years thereafter the following scale to be

Blank and printed forwarders, \$15.00 per week; second forwarders, \$13.50 per week; rulers and finishers, \$16.00 per week; foremen, \$18.00 per week; cutters, machine operators, \$12.00 per week.

Piece and contract work and helpers not allowed.

APPRENTICES.

First year—First six months, \$2.00 per week; second six months, \$2.50 per week.

Second year—First six months, \$3.00 per week; second six months, \$4.00 per week.

Third year—First six months, \$5.00 per week, and a raise of \$1.00 per week every six months, during remainder of apprenticeship.

Fifty-four hours shall constitute a week's work. Overtime to be paid for at the rate of price and one-half. Sundays, New Year's, Decoration, Labor, Thanksgiving and Christmas days with the Fourth of July, price and one-half.

In each office the first forwarder employed shall receive the scale as set forth for first man; and second forwarders, \$13.50.

This is a minimum scale and it is agreed where workmen are receiving a higher rate of wages the same shall not be reduced.

Where two or more journeymen are employed one shall be recognized as foreman.

INTERNATIONAL BROTHERHOOD OF BOOKBINDERS, NO. 88, DES MOINES.

(Bindery Women's Union.)

The following schedule takes effect December 1, 1902.

Sewing on four twines 12½ signatures, 1 cent; sewing on two or three twines 16 signatures, 1 cent; sewing single sections on three twines, 9 signatures, 1 cent; folding 16 page size sheets 19x25, no larger, per 100 sheets, 1 cent; folding 16 page size sheet, 19x25x36, no larger, per 100 sheets, 4½ cents; folding 16 page sheets from 24x36 to 28x42, no larger, per 100 sheets, 5 cents; folding 8 page sheets, size 8x12, or smaller, per 100, 3 cents; folding 12 page sheets, per 100, 5 cents; folding 4 page sheets, per 100, 2 cents; folding end sheets double, per 100, 2½ cents; covering 1 signature, per 100 books, 6 cents; covering 2 to 10 signatures, per 100 books, 10 cents; anything above 10 signatures, time, 16 2-3 cents; tipping, per 100 tips, 4 cents; cutting, one single cut, per 100 sheets, 3 cents; each additional cut, per 100 sheets, 3 cents; collating, per 1,000 sheets, 8 cents; gathering per 1,000 sheets 8 cents; stabbing, per 1,000 sheets, 8 cents; inserting, to be done on time, 16 2-3 cents; pulling of books per hour, 16 2-3 cents; numbering single impressions, 1,000 numbers, 12½ cents; numbering double impressions, 1,000 numbers, 25 cents; each additional impression, 1,000 numbers, 12½ cents.

The term of apprenticeship shall be eighteen months, for the first six months, \$3.00 per week. For the next twelve months, 10 cents per hour.

After apprenticeship expires for general bindery girls, 14 cents per hour for eighteen months.

Miscellaneous work for general bindery girls, including blank book workers and machine operators, 16 2-3 cents per hour.

One apprentice to each office employing four members of the union, two to seven three to ten, four to fourteen.

Nine hours shall constitute a day's work.

Sundays, Fourth of July, Christmas, Thanksgiving, New Year's, Decoration Day and Labor day, double time.

Night work, time and one-half or price and one-half.

In laying off employes apprentices must be laid off first.

Jessie McGreagor, President.

Hanna E. Roseberry, Secretary.

E. S. Condon, President.

P. E. Spencer, Secretary.

Allied Printing Trades Council.

BOOT AND SHOE WORKERS.

SAMPLE UNION STAMP CONTRACT AT DUBUQUE.

Agreement entered in this day of 190.. by and between shoe manufacturer of hereinafter known as the employer, and the Boot and Shoe Workers' Union, with headquarters at 434 Albany Building, Boston, Massachusetts, hereinafter known as the union, witnesseth:

1. The union agrees to furnish its union stamp to the employer free of charge, to make no additional price for the use of the stamp, to make no discrimination between the employer and other firms, persons or corporations who may enter into an agreement with the union for the use of the union stamp, and to make all reasonable effort to advertise the union stamp, and to create a demand for the union stamped products of the employer, in common with others employers using the union stamp.

2. In consideration of the foregoing valuable privileges, the employer agrees to hire as shoe workers only members of the Boot and Shoe Workers' Union, in good standing, and further agrees not to retain any shoe worker in his employment after receiving notice from the union that such shoe worker is objectionable to the union, either on account of being in arrears for dues or disobedience of union rules or laws, or from any other cause.

3. The employer agrees that he will not cause or allow the union stamp to be placed on any goods not made in the factory for which the use of the union stamp was granted.

4. It is mutually agreed that the union will not cause or sanction any strike, and that the employer will not lock out his employes while this agreement is in force.

All questions of wages or conditions of labor which cannot be mutually agreed upon, shall be submitted to The decision of this board of arbitration shall be final and binding upon the employer, the union and the employes.

5. The union agrees to assist the employer in procuring competent shoe workers to fill the places of any employes who refuse to abide by section four of this agreement, or who may withdraw or be expelled from the Boot and Shoe Workers' Union.

6. The employers agree that the union collectors in the factory shall not be hindered or obstructed in collecting the dues of members working in the factory.

7. The employer agrees that the general president, or his deputy upon his written order, may visit the employes in the factory at any time.

8. The employer agrees that the union is the lawful owner of the union stamp.

9. The union agrees that no person except the general president, or his deputy upon his written order, shall have the right to demand or receive the union stamp from the employer.

10. Should the employer violate this agreement, he agrees to surrender the union stamp or stamps in his possession to the general president, or his deputy, upon his written order, and the said general president, or his deputy, may take said stamp or stamps, wherever they may be, without being liable for damages, or otherwise.

11. In case the said employer shall for any cause fail to deliver the said stamp or stamps to the general president or his deputy, as provided in this agreement, the employer shall be liable to the general president in the sum of two hundred (200) dollars as liquidated damages, to be recovered by the general president in an action of contract, brought in the name of the general president, for the benefit of the union, against the employer.

12. This agreement shall remain in force until.....

Should either party desire to alter, amend or annul this agreement, it should give a written notice thereof to the other party three months before the expiration of the agreement; and if the parties fail to give such notice, the agreement shall continue in force for another year, and so on from year to year until such notice is given.

13. In case the employer shall cease to do business, or shall transfer its business, or any part thereof, to any person or persons, or corporation, this agreement shall be ended, and the stamp or stamps shall be returned to the general president forthwith, without demand from the Union, when a new agreement of similar tenor as this may be entered into.

Signed,

By.....for the Employer.

(Seal)

By.....for the Union.

At a legal meeting of Local.....No.....held this.....190.. the foregoing contract was approved.

Signed,

.....Pres

.....Sec'y.

(Local Seal)

Local Union.....No...

No change in the above printed contract will be recognized unless agreed to and countersigned by the general president of the Boot and Shoe Workers' Union.

BRICKMAKERS—DES MOINES.

CONTRACT AGREEMENT BY THE BRICK OPERATORS OF IOWA AND THE INTERNATIONAL BRICK, TILE AND TERRA COTTA WORKERS' ALLIANCE, DISTRICT NO. 6, DES MOINES.

1. All employees employed on brickyards, who are classified in this scale of wages, shall be members of the International Brick, Tile and Terra Cotta Workers' Alliance.

2. The minimum for all pit men, house men, pickers, who shall not pick to exceed 15,000 brick per day, transfer men, crusher feeders, and all common yard laborers shall be 20 cents per hour for nine hours. Nine hours shall constitute a day's work in all cases except in kiln and boiler firing.

3. That the price for experienced puggers shall be 22½ cents per hour. Six months to be served before one shall be considered as an experienced pugger.

4. In yards where the capacity is 25,000 brick per day, or less, engineers shall receive \$2.25 per day; in all yards over that capacity, engineers shall receive \$2.50 per day.

5. That the minimum price for kiln and boiler firing shall be 17½ cents per hour, twelve hours to constitute a day's work. No employee except the boiler fireman shall be allowed to fire the boilers; and any night watchman firing shall be considered a fireman and receive the same scale. Firemen, working less than twelve hours per day shall receive twenty cents per hour.

6. The contract price for setting green brick shall be 40 cents per thousand. The scale for setting building blocks and tile shall be: Setters, 30 cents per hour; pitchers, 25 cents per hour; and transfer men, 25 cents per hour, with privilege of contracting.

7. The minimum price for pitching burnt brick shall be 20 cents per thousand in the kilns and 16 cents per thousand on the yard. Wheelers and pitchers shall receive 25 cents per hour with privilege of contracting.

8. Where blacksmiths are employed the wages shall be \$2.25 per day.

9. The right to hire and discharge, the management of the yard and the direction of the working force, are vested exclusively in the operator, and the International Brick, Tile and Terra Cotta Workers' Alliance shall not abridge this right. It is not the intention of this provision to encourage the discharge of employes, or the refusal of employment to applicants, because of personal prejudice or activity in matters affecting the I. B., T. & T. C. W. A. If any employe shall be suspended, or shall be discharged by the company, and it is claimed an injustice has been done him, an investigation shall be held, and if it is proven that an injustice has been done, the operator shall reinstate said employe and pay him full compensation for the time he has been suspended and out of employment. Provided, however, that if no decision shall be rendered within three days, the case shall be considered closed in so far as compensation is concerned; provided, further, that the case must be settled within one week.

10. On each yard an employe may act as committeeman and he shall hear complaints and grievances of all kinds; and, if he finds them well founded, he shall endeavor to adjust the same with the employer or his representative, and may call in the president of his union to aid him. Failing in this, the matter in dispute shall be left to arbitration, the employer interested selecting one, the district council one; and if these fail to agree, they shall select a third. A decision of the majority thus selected shall be binding upon all parties. Pending such arbitration, work shall be continuous, the whole object of this section being to prevent strikes on the part of the employes and lockouts on the part of employers. The expense of all such arbitration shall be equally shared between the parties thereto. Such arbitration committee shall meet within two working days from and after being notified of their selection.

11. Any yard striking, in violation of the above provision, will not be recognized or sustained by the council.

12. All employers shall pay their employes every two weeks, and on Saturday, or as the state law applies to the miners.

13. The operators agree to check off all dues, initiation fees, assessments or fines from the employes when desired, and the local union agrees to protect the operators where such checking off is done. All members working on the yards relinquish all their rights to all amounts so checked off, but no compensation shall be charged for such deductions.

All yards not governed by these articles shall continue under the same agreement as last year, except they shall pay at least twice per month.

These articles shall be in full force and effect for one year on and after the fifteenth day of April, 1903.

Made and entered into this.....day of..... A. D. 1903.

District Number Six.

....., President.

....., Recording Secretary.

BRICKMAKERS—OTTUMWA.

AGREEMENT.

To all who are concerned: This agreement is herewith entered into by and between the Ottumwa Brick & Construction Co., parties of the first part, and the Brick, Tile and Terra Cotta Workers' Union, Local No. 119, parties of the second part, all of Ottumwa, Iowa, whereby the following scale of wages, hours and conditions for all who are employed by said company. This agreement to be in force from April 1, 1903, to April 1, 1904. It is mutually agreed that the following scale of wages and hours shall govern all employes, as specified below:

1. All shovelers and roustabout men shall receive \$1.50 per day for nine hours.

2. Green brick setters, off bearers and kiln repairers, not including helpers, \$2.00 per day for nine hours.
3. Puggers shall receive \$2.00 per day for nine hours.
4. Endaly kiln firemen shall receive \$1.95 per day for twelve hours.
5. Continuous kiln firemen shall receive \$2.18 per day for twelve hours; and night firemen on continuous kiln shall receive \$2.43 per night for twelve hours.
6. Outside truckers shall receive \$1.50 per day for nine hours.
7. Inside truckers shall receive \$1.65 per day for nine hours.
8. Crusher feeder shall receive \$1.75 per day for nine hours.
9. Night watchman and fireman shall receive \$1.95 per night for twelve hours.
10. Ollers and car placers shall receive \$1.00 per day for nine hours.

11. It is further agreed that any change of work of men employed at the Ottumwa Brick & Construction Co., that the men so changed shall receive the prevailing scale of the man whose place he has taken; but in no case shall a man be reduced in his wages in changing his position except by consent of employee. All overtime shall be based on the regular wages paid per hour on his respective work, except Sundays, which shall be eight hours with regular pay.

It is further agreed that the company has the right to employ non-union men, but said man shall within a reasonable time become a member of said union by signing an application for membership at the company's office and allowing one-half of the membership fee and first month dues, to be collected, one-half his first pay and one-half his second pay, and company to turn over same to union as decided by them.

And in no case shall a man absent himself from work without a reasonable excuse to the company and if such parties are absent through carelessness or neglect of duty his place can be filled at discretion of the company; and at any time an employe fails to do his duty the foreman has a right to discharge him; and if not found satisfactory be left to the committee hereafter appointed.

It is further agreed that a committee of four shall be appointed; two by the company and two by the union, and in a case of disagreement a fifth man to be selected by the committee and in case of no agreement or other causes, there is to be no leaving or striking of the men without a ten days' notice after the committee could not agree.

It is further agreed that there shall be no sympathetic strikes for the period of this contract, except when ordered out by the central body or by the International Board of the Brick, Tile and Terra Cotta Workers' Alliance. That the oldest man shall have the preference in case of promotion according to time served for said company, provided he is competent to fill said position. That we reserve the right to observe Labor Day and all legal holidays.

Ottumwa Brick & Construction Co.,

By D. F. More, Secretary and Treasurer.

Geo. McMickle,

H. E. Roe,

Jas. O. Ford

W. J. Black,

C. F. Soules,

Committee.

BUILDING LABORERS—CLINTON.

ARTICLES OF AGREEMENT.

This agreement made and entered into this.....day of.....1903, by and between....., contractors and builders of Clinton, Iowa, party of the first part, and Building Laborers' and Hod Carriers' Union, No. 9782, a local branch of the American Federation of Labor, of Clinton, Iowa, by its president and recording secretary of the same place, party of the second part—

WITNESSETH, That for and in consideration of the covenants, and agreements hereinafter to be made by said second party, the first party covenants and agrees to, and with the second party that he or they will employ members of the union of said second party, that nine hours shall constitute a day's work, and that time and a half shall be paid for all overtime, and that he or they shall pay not less than twenty (20) cents per hour for building laborers, and twenty-two and one-half (22½) cents per hour for hod carriers and mortar mixers.

And be it further agreed that, for and in consideration of the covenants and agreements heretofore made by said first party, the said second party agrees to use, so far as lies in its power, all possible diligence to obtain for said first party competent union journeymen workmen. All complaints from said first party or his employes shall be immediately investigated by a committee of said second party appointed for that purpose and shall, if possible, be quickly and peremptorily settled. It is mutually agreed that said second party shall be the sole judge of the moral character of all applicants for membership; that all agreements or disputes which cannot be settled otherwise shall be submitted to an arbitration committee of five (5), two (2) of which shall be building laborers and hod carriers, two (2) members of the contractors, and these four to select some disinterested party for the fifth (5th) member. They shall meet within twenty-four (24) hours. From the decision of this committee there shall be no appeal, and the costs of the investigation shall be paid by the party against whom the decision is rendered. This agreement goes into effect from this date and shall continue in full force, from May 1st up to April 15th, 190..

..... Contractor and Builder.

E. J. Witt, President.

Local No. 9782 B. L. & H. C.

A. Crider, Recording Secretary.

Local No. 9782 B. L. & H. C.

(SEAL)

Clinton, Iowa.....190..

BUTCHER WORKMEN—DES MOINES.

AGREEMENT.

This agreement, made this twenty-sixth day of May, A. D. 1903, by and between Local Union No. 187, Amalgamated Meat Cutters and Butcher Workmen of North America, party of the first part, and proprietors and operators of meat markets in the city of Des Moines, Iowa, party of the second part, for a period of one year.

We, the party of the second part, agree to the following:

1. That we will close our respective markets at 7 o'clock P. M. each night except Saturday and the evening before legal holidays.

2. That we further agree to pay fifty cents per hour for all legal holidays and overtime.

3. That we will employ none but union help in good standing.
4. That we also agree to pay inside men a minimum scale of \$12 per week, providing said employe has had at least two years' experience in a market. We further agree to pay delivery boys a minimum scale of \$6 per week.
5. We further agree to furnish the necessary linen and laundry for inside men.
6. That we, the party of the first part, do hereby agree to favor the party of the second part by working Decoration Day, Fourth of July and overtime during State Fair week, also the evening before legal holidays free of charge.

Respectfully submitted,

Chas. Jones,

Secretary.

Chas. Smith,

Chas. Jones,

Chas. C. McCabe,

Wm. Russell,

James Grace,

Committee.

P. S.—Eleven hours shall constitute a day's work, and each employe shall be allowed one hour for noon.

CARPENTERS—DES MOINES.

TO THE BUILDERS AND CONTRACTORS, Des Moines, Iowa.

GENTLEMEN—At a regular meeting of Local Union No. 106, Des Moines, Iowa, a committee of five was appointed to draft resolutions looking to a better understanding between the contractor and trades union, the committee herewith present these resolutions for your consideration and approval.

1. Eight hours shall constitute a day's work, between the hours of 8 A. M. and 5 P. M. Time and one-half for overtime and night work, except where two or more shifts are employed, in which case it will be straight time. When deemed necessary by the contractor to work shifts, he shall notify the steward in writing.

2. Double time for Sundays and legal holidays. Decoration Day, Fourth of July, Labor Day and Christmas shall be considered legal holidays.

3. None but union carpenters are to be employed by contractors, but non-union carpenters will be given not to exceed three days' trial, and if satisfactory to the foreman he shall sign an application to become a member of Local Union 106, or quit work.

4. Section 3 or Article XI Local By-Laws:

Any member working for an owner or agent on job work shall charge the same price per hour as is customary among contractors.

Section 6 of Local By-Laws:

Any member violating Section 3 of Article XI shall be fined not less than three (\$3.00) dollars for the first offense, and for the second offense the fine shall be not less than three times the sum of the first.

5. A contractor knowing of any member of Local Union 106 violating any of these trade rules as herein agreed to, shall report the same to 106 in writing for investigation.

6. Local Union 106, Des Moines, Iowa, demand that on and after April 1st, 1902, the standard wages for journeymen carpenters shall be thirty-seven and one-half cents per hour, and the minimum wages shall be thirty-two and one-half (32½) cents per hour. (Except for contracts made prior to February 1, 1902, which shall be the same basis of wages as for 1901.)

7. A steward and business agent shall be recognized on all jobs, and they shall attend to the business of the union so as not to interfere with the employee's time or make him any expense.

We the undersigned sign the foregoing for the Business Exchange.

W. F. Mitchell, President.
Chas. Weitz, Jr., Secretary.
W. D. Koaser, at Monarch's Barn.
L. A. Stoneroad & Son.
H. C. Miller.
Geo. Cunningham & C. A. Bowman.
A. H. Stewart.
J. S. McKelvey.
E. L. Bentley.
W. B. Christy.
John Snyders.
Kemp & Gibson.
B. F. Garmer.
G. S. Nelson.
J. Smith.
J. H. Hood.
A. L. Smith.
James Horsburg.
Pearl Lovejoy.
J. S. Greeley.
R. Crawford.
R. H. Baldrick.
U. S. Badgley.
F. P. Snider.

CAR SHOPMEN.

AGREEMENT WITH IOWA CENTRAL RAILROAD.

The agreement between the company and the employes, as signed and now in effect, is as follows:

1. Ten hours shall constitute a day's work, all overtime worked by the regular car men between 6 P. M. and 7 A. M. and Sundays and legal holidays shall be paid for at the rate of time and one-half. Legal holidays shall be New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas.

2. All inspectors, oilers and others who work in the yards or on work that requires their services every day in the week, shall receive only straight time for work done on nights, Sundays and holidays, unless they should be required to extend their hours of work over their regular working hours, when they shall receive time and one-half for excess hours.

3. Men sent to take the place of inspectors or other men receiving higher rate of pay, shall receive such higher rate and actual expenses while away, not exceeding fifteen days.

4. Wrecking crews shall be paid straight time traveling to and from wreck and waiting at wreck or in transit commencing from the time for which they are called, and for work at wrecks in accordance to the regular schedule, except if wreck train ties up for rest at night, they will not be paid for this time. Necessary expenses will be covered.

5. Men shall be promoted as rapidly as vacancies occur according to their merit, ability and seniority, that is, the longest in service shall have preference, providing ability is equal.

6. When it becomes necessary to reduce expenses, the full force of car men in shops shall be retained and reduction made in working hours, until the reduction has reached eight hours, then the further reduction shall be made by dismissing the single men and retaining the married men, providing ability is the same.

7. The car men's committee shall be recognized in case of grievances arising and the company agrees that no discrimination shall be made, whatsoever.

8. When requested, the company will grant leave of absence to car men who desire to go before the management for adjustment of grievances.

9. In case of grievances or disputes arising between the employees and their superior officers, it is understood that the employees have the right to appeal to the highest officer connected with the road.

10. Men leaving, or being dismissed from the service of the company, shall, upon application, be given service letter, stating time and capacity of service, or cause of dismissal.

11. When a car man is called from home at night for an emergency job of any kind, the minimum allowance under schedule will be three hours.

12. No car man shall be discharged without good and sufficient reason, and if, on application to car men's grievance committee, he asks for further investigation, it shall be granted him and if found he has been unjustly discharged, he shall be immediately reinstated.

13. The advances made to car inspectors, car repairers, laborers and other car shop employes, as listed, are accepted. Car shop laborers are advanced 10 cents, or from \$1.40 to \$1.50 per day. Car inspectors and car repairers in the yards, receiving \$1.50, are raised to \$1.60 and those receiving \$1.60 are advanced to \$1.70. Inspectors working nights on account of longer hours to receive 10 cents per day over the above rates.

14. This agreement to take effect July 1, 1903, and remain in force one year. Thirty days' notice shall be given should either party wish to alter this agreement.

A. W. Dickson,
C. O. Seberg,
L. Houghton,
Ross Sheetz,
G. Dunwoody,
Committee.
George D. Brooke,
Supt. of Machinery.
W. O. Johnson,
Master Mechanic.

CIGARMAKERS—DAVENPORT.

BILL OF PRICES OF UNION NO. 172—DAVENPORT, IOWA.

CLEAR SEED SCRAPS OR LONG FILLER—4½ inches or less, per M., \$8.00. Each additional ¼ inch or fractional part thereof, 50 cents extra per M.

ROLLING WORK—4½ inches or less, per M., \$5.00. Each additional ¼ inch or fraction part thereof, 25 cents extra.

BUNCH BREAKING.—4½ inches or less, per M., \$3.00. Each additional ¼ inch or fraction part thereof, 25 cents extra per M.

SEED AND HAVANA WORK—4¼ inches or less per M., \$10.50. Each additional ¼ inch or fractional part thereof, 50 cents extra per M.

ROLLING WORK—4¼ inches or less, per M., \$6.50. Each additional ¼ inch or fractional part thereof, 25 cents extra per M.

BUNCH BREAKING—4¼ inches or less, per M., \$4.00. Each additional ¼ inch or fractional part thereof, 25 cents extra per M.

Hand work \$1.00 extra. Above two fillers 50 cents extra for each additional filler mixed on the table. All cigars with extraordinary small tucks \$2.00 extra. Soft work, raised lids, or less than five molds \$1.00 extra. All fancy or perfect shapes \$1.00 extra. All stock must be prepared. All cigars required other than shape of mold \$1.00 extra. All wages must be paid in cash weekly. Whenever a member is given the bunches of an apprentice to roll and is not required to give any instructions but roll them as they are, such member shall receive the rolling price only. But if he must give instructions to the apprentice, or throw out many bunches, or is held responsible for the smoking of the cigar, he shall get the full price as though said member made the entire cigar. One apprentice to ten men, and one apprentice to each additional ten men; but in no case shall there be more than four apprentices in a shop. All questions arising and not covered by this bill shall be decided by the union. Havana wrappers \$1.00 per 1,000 extra. No cigars shall be sold for less than \$23.00 per 1,000. More than one-fourth Havana same as seed and Havana. Clear Havana \$1.00 above all other work.

CIGARMAKERS—MASON CITY.

BILL OF PRICES OF LOCAL UNION NO. 270, MASON CITY, IOWA, TO TAKE EFFECT MARCH 28, 1903.

CLEAR HAVANA HAND WORK—4 inches or less, \$13.00; 4½ inches or less, \$14.00; 4¾ inches or less, \$15.00; 5 inches or less, \$16.00; 5½ inches or less, \$17.00.

CLEAR HAVANA MOULD WORK—4 inches or less, \$12.00; 4½ inches or less, \$13.00; 4¾ inches or less, \$14.00; 5 inches or less, \$15.00; 5½ inches or less, \$16.00.

CLEAR SEED HAND WORK—4½ inches or less, \$9.00; 4¾ inches or less, \$10.00; 5 inches or less, \$11.00; 5½ inches or less, \$12.00.

CLEAR SEED MOULD WORK—4 to 4½ inches, \$8.00; 4¾ inches, \$9.00; 5 inches, \$10.00.

All mixed cigars one-fourth or less Havana filled \$1.00 advance of seed cigars. More than one-fourth Havana filled same as clear Havana. All mould work less than five blocks to be the same as hand work. All stock must be stripped. All peculiar shapes to be decided by executive board.

APPRENTICE RULE—One apprentice to each shop. Two apprentices to five journeymen. Three apprentices to twenty-five journeymen, shall constitute the limit. All wages in cash weekly.

W. L. Larrabee,
C. C. Felt,
W. O. Forsythe,
Committee.

COOKS AND WAITERS—DES MOINES.

AFFILIATED WITH AMERICAN FEDERATION OF LABOR, DES MOINES
TRADES AND LABOR ASSEMBLY, IOWA FEDERATION OF LABOR.

We, the members of the above named unions of Des Moines, do hereby submit the following proposition to the hotel and restaurant proprietors of Des Moines. That we will at all times, while on duty, be neat, clean and sober, and do our work in a respectable manner. Any member of our organization that becomes intoxicated or makes any disturbances with other employees or guests will be fined

by the local if reported. A member must give notice or furnish a substitute when quitting their positions. A member, if sick or unable to work, must inform their employer before time of coming on work. Any complaint against a member must be made in writing.

I,.....proprietor of the.....located at.....do this day enter into an agreement with the Des Moines Joint Executive Board of the above named unions to employ only members in good standing and pay the following scale from day of.....190..to the.....day of.....190..

WAITERS' MINIMUM SCALE OF WAGES

NOTE—House to furnish all linen for waiters and laundry the same.

NOTE—Ten (10) hours, including meals, with but one split, shall constitute a day's work, except fair week, carnivals and national conventions, when eleven hours shall prevail.

1. Waiters working steady shall receive not less than nine (\$9.00) dollars per week.
2. Waiters working dinner and supper shall receive not less than one (\$1.00) dollar for four hours' work, or less, payable daily.
3. Waiters working one meal shall receive not less than fifty (50) cents for two hours' work or less, payable daily.
4. Waiters working overtime shall receive not less than twenty-five (25) cents per hour or fraction thereof.
5. Waiters working extra, outside regular crew, shall receive not less than two (\$2.00) dollars per day, except during fair week, carnivals and national conventions, when they shall receive not less than three (\$3.00) dollars per day.
6. Waiters working steady (regular crew) during fair week, carnivals and national conventions shall receive \$2.50 per day. Amount of day left to arbitration between the Joint Executive Board and the Proprietors' Mutual Protective Association.
7. Waiters working night and dog-watch shall receive not less than ten (\$10.00) dollars per week.

NOTE.—Any one acting in the position of head waiter shall receive not less than twelve (\$12.00) dollars per week.

NOTE a.—Members of this organization shall do only the work of a waiter, silver work and sweeping and scrubbing excluded.

GARDENS AND PARKS

1. Waiters shall receive not less than twenty-five (25) cents per hour for not less than four (4) hours each day.
2. Waiters on per cent shall receive not less than twenty-four (24) five (5) cent checks for one dollar (\$1.00.)

NOTE.—Waitresses shall receive same pay as men for garden and parks.

WAITRESSES' MINIMUM SCALE FOR SHORT-ORDER HOUSES RESTAURANTS AND CAFES.

Waitresses to furnish their own linen the house to laundry same. Employers desiring uniforms shall furnish them at their own expense.

1. Waitresses working steady shall receive not less than seven (\$7.00) dollars per week.
2. Waitresses working dinner and supper, four hours per day, shall receive not less than four dollars (\$4.50) and fifty cents per week.
3. Waitresses working one meal shall receive not less than thirty-five (35) cents for two hours' work or less, payable daily.
4. Waitresses working overtime shall receive not less than twenty-five (25) cents per hour or fraction thereof.
5. Waitresses working extra shall receive not less than two (\$2.00) dollars per day.
6. Waitresses working extra fair week, carnivals and national conventions shall receive not less than two and one-half (\$2.50) dollars per day.

7. Waitresses working steady (regular crew) during fair week, carnivals and national conventions shall receive not less than \$2.00 per day. Number of days to be arbitrated between the Joint Executive Board and the Proprietors' Mutual Protective Association.

8. Waitresses working night or dog-watch shall receive not less than seven (\$7.00) dollars per week.

NOTE.—Ten (10) hours, including meals, with but one split, shall constitute a day's work. Except fair week, carnivals and national conventions, when eleven (11) hours shall prevail.

HOTELS OR AMERICAN PLAN HOUSES.

1. Waiters working steady shall receive not less than twenty-five (\$25.00) dollars per month, room in; thirty (\$30.00) dollars, room out.

2. Waiters serving banquets, parties and balls shall receive not less than two (\$2.00) dollars; "set up and clean up," full dress.

WAITRESSES' SCALE FOR HOTELS AND AMERICAN PLAN HOUSES.

1. Waitresses working steady in hotels shall receive not less than twenty (\$20.00) dollars.

2. Waitresses working parties, banquets or balls shall receive not less than two (\$2.00) dollars.

WAITRESSES' MINIMUM SCALE FOR REGULAR MEAL OR AMERICAN PLAN HOUSE.

1. Waitresses working steady shall receive not less than six (\$6.00) per week.

2. Waitresses working dinner and supper shall receive not less than four (\$4.00) dollars per week, for four (4) hours' work per day or less.

3. Waitresses working one meal shall receive not less than thirty-five (35) cents for two (2) hours' work, payable daily.

4. Waitresses working overtime shall receive not less than twenty-five (25) cents per hour or fraction thereof.

5. Waitresses working extra shall receive not less than one dollar and fifty (\$1.50) cents per day.

6. Waitresses working extra during fair week, carnivals and national conventions shall receive not less than two dollars and fifty (\$2.50) cents per day.

7. Waitresses working steady (regular crew) during fair week, carnivals and national conventions shall receive not less than \$2.00 per day. Number of days to be arbitrated between the Joint Executive Board and the Proprietors' Mutual Protective Association.

NOTE.—Nine hours shall constitute a day's work except fair week, carnivals and national conventions, when ten (10) hours shall prevail. All waiters and waitresses affected by this scale shall be allowed three hours Labor Day to participate in parade.

EXCURSIONS AND PICNICS.

1. Waiters shall receive not less than three (\$3.00) dollars per day.

Waitresses working at picnics or excursions shall receive not less than two (\$2.00) dollars per day.

COOK'S MINIMUM SCALE

1. Head cooks shall receive not less than sixteen (\$16.00) dollars per week. Second cooks shall receive not less than twelve (\$12.00) dollars per week.

2. One cook in house shall receive not less than twelve (\$12.00) dollars per week.

3. Night or dog-watch cook shall receive not less than eleven (\$11.00) dollars per week.

4. Apprentices working on range shall receive not less than seven (\$7.00) dollars per week.
5. Pastry cooks or bakers shall receive not less than twelve (\$12.00) per week.
6. During fair week and carnivals regular crew shall receive not less than seven (\$7.00) dollars extra for the week's work.
7. Extra cooks, fair week and carnivals, shall receive not less than three dollars and fifty (\$3.50) cents per day.
8. Overtime cooks shall receive fifty (50) cents per hour or for majority fraction thereof; twenty-five (25) cents for each hour or fraction thereof thereafter.
9. Cooks becoming intoxicated while on duty, or coming on watch in same condition, will be fined five (\$5.00) for first offense and ten (\$10.00) dollars for each additional offense.
10. Houses shall laundry all linen used while at work.
11. All employes affected by this scale shall be allowed three hours Labor Day to participate in parade.
12. Cooks not showing up for work without furnishing a substitute or giving due notice to the proprietor before time for going on watch will be fined five (\$5.00) dollars. All complaints must be made to the local in writing.

NOTE.—Eleven hours, including meals with but one split shall constitute a day's work, except fair week, carnivals and national conventions, when eleven hours shall prevail.

HOTELS OR AMERICAN PLAN HOUSES.

1. Where three or more cooks are employed, the head cook shall receive not less than seventy-five (\$75.00) dollars per month. Second cook not less than fifty-five (\$55.00) dollars per month. All other cooks shall receive not less than forty (\$40.00) dollars per month.
2. Houses employing two cooks shall pay their head cook not less than sixty-five (\$65.00) dollars per month, second cook not less than forty-five (\$45.00) dollars per month.
3. Houses employing one cook shall pay the cook not less than fifty-five (\$55.00) dollars per month.
4. Overtime shall be paid for at the rate of fifty (50) cents per hour for first two hours and twenty-five (25) cents for each hour thereafter. Majority fraction shall be considered as full hour.
6. Regular crews, during fair week, carnivals and national conventions shall receive not less than seven (\$7.00) dollars extra for the week's work. Extra cooks shall receive not less than three dollars and fifty (\$3.50) cents per day.
7. Head pastry cooks or bakers shall receive not less than sixty (\$60.00) dollars per month. Second not less than forty (\$40.00) dollars per month.
8. Women pastry cooks or bakers shall receive (for head) not less than forty (\$40.00) dollars per month. Seconds not less than thirty-five (\$35.00) dollars per month.
9. Women, when doing a man's work, shall receive a man's pay.
10. Houses shall launder all linen used by employes while at work.
11. Ten hours, including meals with but one split shall constitute a day's work, except fair week, carnivals and national conventions, when eleven hours shall prevail.
12. All employes affected by this scale shall be allowed three hours Labor Day to participate in the parade.
13. Cooks becoming intoxicated while on duty, or coming on watch in same condition will be fined five (\$5.00) dollars for first offense and ten (\$10.00) dollars for each additional offense.
14. Cooks not showing up for work without furnishing a substitute or giving due notice to the proprietor before time for going on watch will be fined five (\$5.00) dollars. All complaints must be made to the local in writing.

This contract void at the option of either party on fifteen (15) days' notice.

..... Secretary.
.....

BARTENDERS' MINIMUM SCALE.

1. Bartenders shall receive not less than twelve (\$12.00) dollars per week of 50 hours or less.

BAR PORTERS' MINIMUM SCALE

1. Bar porters shall receive not less than nine (\$9.00) dollars per week of 50 hours or less.

2. Short time porters shall receive not less than five dollars (\$5.00) per week of 18 hours or less.

3. House to furnish all linen and the laundrying of the same.

4. Bar porters shall receive twenty-five (25) cents per hour for extra time.

Dated at Des Moines, Iowa, this day of 190..

Signed

BARTENDERS—KEOKUK.

KEOKUK, IOWA, March 4, 1903.

At a regular meeting of the Keokuk Bartenders League of Local No. 535, affiliated with the American Federation of Labor, the following schedule of wages and hours was adopted: Wages \$10 per week, minimum hours 70 per maximum; all extra hours be paid at the rate of 50 cents per hour. Beer gardens, concerts, balls, picnics and excursions 50 cents per hour, meals included. All special days 50 cents per hour for extra men. Special rates will be made street fair by this local. Proprietors doing their own work can have the use of the bar card for 60 cents per month (monthly dues of this local). If at any time they have extra or regular work for bartenders they must give preference to a member of the Bartenders International League of America if available. Any other person given employment as a bartender must have six months' experience and make application to this local for membership within ten days of entering into the duties of bartender for you. He must be of the white race and eighteen years of age. Proprietors having one member in good standing in the Bartenders' International League of America in their employment can have an apprentice, said apprentice to be of the white race and eighteen years of age. He must be under the supervision of a member of the Bartenders' International League of America, or one or other of the proprietors, at no time will he be allowed to be on watch alone. After six months' service as an apprentice bartender he must become a member of the Keokuk Bartenders' League, Local No. 535, Keokuk, Iowa. For the use of the bar card of the International League of America, we the proprietors sign this agreement.

....., Proprietor.

Robert Hanley, President.

James Carass, Financial Secretary.

Attested: Joseph A. Reilly, Recording Secretary.

COOPERS—DUBUQUE.

AGREEMENT.

An agreement entered into this first day of May, A. D. 1902, between Dubuque Malting Company, party of the first part, and employes of coopers associated together as Local Union No. 29, of the Coopers' International Union of North America (A. F. of L.), party of the second part.

It is hereby agreed by parties of the first part that they will pay to the parties of the second part, the following schedule of prices for the period of time beginning May 1, 1902, and ending May 1, 1903.

Whole barrels, \$1.25, three-piece heading, 5 cents extra; half barrels, 80 cents, three-piece heading, 5 cents; extra; quarter barrels, 65 cents, three-piece heading, 5 cents extra; eighth barrels, 45 cents three-piece heading, 5 cents extra.

Bushing, per bush, 3 cents. Bucked or rough staves, same price on any work. Cull stock on any work, 5 cents extra. Day labor, per hour 25 cents. Time and one-half for overtime work. Barrel stave, 25 cents; head, 15 cents; hoop, 5 cents; half barrel stave 17 cents; head, 12½ cents; hoop, 5 cents; quarter barrel stave, 15 cents; head, 10 cents; hoop, 4 cents; eighth barrel stave, 15 cents; head, 10 cents; hoop, 4 cents; change of hoops, 2 cents apiece. Furnished shucks.

The hours of labor shall be from 7 A. M. to 12 o'clock noon, and from 1 P. M. to 6 P. M. Should a cooper be taken from the shop to do any work, he shall receive 25 cents per hour.

The parties of the first part agree to employ no cooper who is not a member in good standing of the Coopers' International Union of North America. The parties of the first part agree to purchase no cooperage which does not bear the official stamp of the Coopers' International Union of North America.

The parties of the second part agree to work for above prices, and perform their work in a satisfactory manner for the period of time stated, and in no case will they uphold a member for not doing so.

F. Matons, Secretary.

.....

'ELECTRICAL WORKERS—DUBUQUE.

DUBUQUE, IOWA, May 8, 1902.

The Dubuque Telephone Company and the International Brotherhood of Electrical Workers do hereby agree to pay and accept 22½ cents per hour for line-man's work done and received, provided union labor be employed in preference to non-union labor.

Frank Stahl,
Dan Bergman,
Committee Linemen.

Vic H. Stevens, President Dubuque Telephone Co.

FIREMEN—STATIONARY.

SAMPLE AGREEMENT BETWEEN THE.....PROPRIETORS OF..... LOCAL.....INTERNATIONAL BROTHERHOOD OF STATIONARY FIREMEN OF.....

1. All firemen, oilers and helpers employed shall be members in good standing of the International Brotherhood of Stationary Firemen, and shall, if not already members of Local No.....become so as soon as possible after securing employment.

2. Firemen, oilers and helpers, where two or more are employed, shall work seven days or nights each week, eight consecutive hours to be a day's or night's work. All firemen, oilers and helpers alternate.

3. Pay day shall be weekly.

4. In case of prolonged sickness of any fireman, oiler or helper, he shall be entitled to employment in his former capacity when he is able to perform his duties, providing he reports within three months.

5. A fireman's duty shall be the generation of steam in the boiler or boilers in the plant where employed. Assistance shall be given to the fireman when necessary to clean back connections during his eight-hour watch. He shall not be asked to

do any work other than that pertaining to the work of the boiler room, but in case of accident or some unforeseen emergency, he shall give such aid and assistance as the nature of the case may require.

6. When any vacancy occurs, any member in good standing in the International Brotherhood of Stationary Firemen may be employed to fill such vacancy.

7. All firemen, oilers and helpers may alternate monthly, or at such periods as the majority of them may agree upon with the approval of the employer, providing such periods do not exceed a month's duration.

8. Whenever a dispute shall arise between parties to this contract, the question or questions in dispute shall be submitted to a board of arbitration. Two members shall be appointed by the employer, two by the employees, and the fifth by the four thus appointed, and both parties of this contract shall abide by the decision of this board. Pending the settlement of any dispute by arbitration, no strike or lockout shall be declared.

9. Firemen and oilers shall be paid at the rate of.....dollars per week. All time over eight hours per day to be paid at the rate of.....cents per hour. Helpers shall be paid.....dollars per week, all time over eight hours to be paid at the rate of.....per hour.

10. Service done by employees in the interest of and for the benefit of the union shall not be a cause for discrimination or discharge.

11. This contract is to take effect.....and remain in force until.....and continue annually unless notice has been given by either party thirty days prior to the first of.....of any year, and at the time of serving such notice, specifications of the proposed notice shall be submitted.

12. Firemen, who are officers of this union, shall be allowed to change watches with partners so that they can attend meetings and perform duties pertaining to such office. Those appointed on committees to have the same privilege, provided reasonable notice is given at.....of such intended change.

FIREMEN—STATIONARY—DES MOINES.

Agreement entered into between the Des Moines City Railway Company and International Brotherhood of Stationary Firemen, Local Union No. 79, all of Des Moines, Iowa, and for the purpose of advancing the mutual best interests of the contracting parties.

1. All stationary firemen and all men doing stationary firing in the employ of the above company shall be members of the Brotherhood of Stationary Firemen. When vacancies occur, whether temporary or permanent, only members of said brotherhood are to be employed, if such can be obtained; if not, the employee engaged shall become a member of said brotherhood within two weeks from the time of his employment.

2. Eight hours shall constitute a day's work for all employees under this agreement. In cases of emergency where employees work over eight hours per day they shall receive at the rate of time and one-half for all overtime.

3. Firemen shall receive a minimum wage rate of \$50.00 per calendar month. Competency and efficiency may be recognized and paid for in advance of this rate.

4. Ash wheelers and boiler washers if they wish to come under this agreement, shall receive an advance of 20 per cent per hour upon the present rate paid for similar work and efficiency.

5. All wages to employees shall be paid at least semi-monthly.

6. It is further agreed between the parties to this contract that in all cases of disagreement as to the terms of this contract or matters not covered by this contract, that such differences shall be referred to arbitrators. One arbitrator to be chosen by each party to this contract and the two as chosen shall select the third arbitrator, and their decision shall be final and binding on the parties to this contract. Work to be continued pending such arbitration.

7. This agreement shall be in full force and effect from and after March 15, 1903, and continue in effect until March 15, 1904. At the expiration of this contract either party desiring to change any of the terms of the same may do so by giving a thirty days' notice in writing thirty days before the expiration of this contract. If such notice is not given this contract shall remain in full force and effect after March 15, 1904, and until such thirty days' notice of desire to change same is given.

8. Neglect of duty, incompetency or insubordination shall be a cause for dismissal.

9. When any fireman cannot report for duty or wishes to lay off, he must notify the superintendent of the power plant six (6) hours in advance of his time to report for duty; and he must not fail to be ready to take his shift unless he has the permission of the superintendent to be off. The superintendent must use diligence to supply the fireman's place when he has been notified he wishes to be off duty.

This agreement entered into at Des Moines, Iowa, this fifth day of March, 1903, by and between

Des Moines City Railway Co.,
By G. B. Hippee, General Manager.
T. W. Nutt, President.
Chas. W. Randolph, Secretary.
Wm. Johnson.
T. Huffman.

GARMENT WORKERS.

SAMPLE NATIONAL AGREEMENT AND PRICE LIST.

This agreement, entered into by and between the firm of....., party of the first part, and the United Garment Workers of America, party of the second part,

1. Witnesseth, that in consideration of the use of the union trade label of the party of the second part, the party of the first part agrees to abide by the following rules and conditions governing the same:

1. All employees engaged in the manufacture of garments for the party of the first part, must be good standing members of the party of the second part.

2. All proper sanitary conditions shall be observed in all shops manufacturing goods for the party of the first part who especially agrees to comply with all the requirements of the state laws relating to workshops.

3. That said label shall be in charge of a responsible member of the union employed in said shop who shall keep an account of the same.

4. The party of the first part shall abide by the union conditions observed in the respective branches of the trade.

5. Should any differences arise between the firm and the employees, and which cannot be settled between them, the said differences shall be referred to the general officers of the U. G. W. of A. for mediation and arbitration.

6. The party of the second part agrees to exert all its power as a labor organization to advertise the goods and otherwise benefit the business of the party of the first part.

7. The party of the first part agrees to return all union trade labels that may be in its possession in the event of the termination of this agreement, or discontinuance of business.

This agreement shall go into effect on the.....day of.....190..., and terminate one year from said date.

Signed by the party of the first part:

Signed by the party of the second part:

SCHEDULE ADOPTED AT THE GENERAL CONVENTION, BALTIMORE, AUGUST 18, 1901.

PRICE LIST FOR OVERALLS, PER DOZEN—OPERATING.

One seam common band overalls, side facings, plain, two patch pockets in front, one in back, single stitched, 60 cents; same overalls with bib, front facings, hemmed back, single stitched, 65 cents; one seam common band overalls, two swinging pockets, one hip, one watch and one rule, single stitched, 65 cents; same overalls with bib and in one piece or seamed on, hemmed back, single stitched, 75 cents; one seam band overalls, double front knee, two swinging pockets, one hip, watch and rule, all pockets double stitched front side facings, stitching to form patch pockets, outside straps with rubber, \$1.05; same overalls with bib, \$1.10; paperhanger's one seam overalls with pockets across front, one hip and brush loop, 75 cents; one seam fancy band overalls with fancy trimmings and curved swinging pocket, curved watch pocket, hip and rule pockets, double stitched and fancy buckle strap, \$1.00; same overalls with bib, straps with rubber, \$1.10; regular two seam overalls with band, two swinging pockets, one hip, watch and rule, double stitched, 84 cents; wide hem overalls, like cheap pants without curtains, 89 cents; regular pants overalls with curtains, \$1.20; two seam bib overalls, two swinging pockets, one hip, one watch, one rule, single stitched, 90 cents; regular apron overalls, two swinging pockets, one hip, one watch, one rule, band back, double stitched without straps, \$1.10; regular railroad overalls with long straps, two swinging pockets two hip, one watch, one combination pocket, one bib, one rule, double stitched, \$1.25; miner's two seam overalls double seat and front to knee, pocket stitched through loops for belt, \$1.05; plain belts, 5 cents; plastering overalls, \$1.35; all overalls made in heavy duck extra, 10 cents; extra sizes from 44 waist up, 12 cents; all extra pockets single stitched, 3 cents; all extra pockets double stitched, 5 cents.

JUMPERS, PER DOZEN.

Solid body without seams, two shoulder seams, not felled, one pocket, straight collar, single stitched plain seat on one side of front, otherwise hemmed, bottom not hemmed, 45 cents; wide hemmed bottom and felled shoulder seams, 55 cents; plain jumper, one seam, all seams felled, also around arm holes, two pockets, double stitched, round corners, facing single stitched, bottom hemmed, plain cuffs and collar, 68 cents; two seam yoke back and front, coat faced fronts, three patch pockets, one combination, all double stitched, cuffs and collar, felled seams and hemmed bottoms, 75 cents; round collar with seam, extra 5 cents; all extra pockets same as overalls.

COATS, PER DOZEN

S. B. sack, single stitched, two seams, two patch pockets, 65 cents; S. B. sack, double stitched, felled seams, faced cuffs, four patch pockets, \$1.00; S. B. lined duck, double stitched, four patch pockets, \$2.25; D. B. lined duck, double stitched, three patch, one swinging, \$2.35; D. B. lined, same as above, with shields and bottom facings, \$2.65; D. B. rubber interlined, three patch and one swinging pocket, \$3.20; D. B. rubber interlined, same as above with shields and bottom facings, \$3.50; sewing in sleeves, plain, 35 cents; sewing in sleeves, rubber interlined, 55 cents; D. B. sack, rubber interlined, five swinging pockets, side pockets, with flaps, muff pockets on breast, shields and bottom facings, \$4.01; setting in sleeves, rubber interlined, 60 cents; D. B. corduroy coats, lined, double stitched, four swinging pockets, no bottom facings, no shields, \$2.40; sleeves, 35 cents; D. B. coats, triple duck, three patch pockets, double stitched complete, \$3.00.

BAR AND BARBERS' COATS AND VESTS, PER DOZEN.

One button drill jacket, 80 cents; four button drill S. B. coat, 90 cents; three pockets, duck coat, \$1.00; D. B. drill coat, \$1.10; D. B. cook's jacket, \$1.00; standing collar, single breasted drill coat, 90 cents; three pockets drill vests, \$1.25;

five or six buttons, four pockets, duck vests, \$1.40; six button vest, \$1.50; S. B. duck coats, \$1.10; D. B. duck coats, \$1.20; one button black safeen jacket, 80 cents; surgeons' gowns, \$1.00; black lined coat, \$2.00; Tuxedo, \$2.50; lined coat, \$1.50; finer lined coat, \$2.00; straight front lined waiter's jacket, \$1.25; striped trimming coats, \$1.10; standing collar, eight button bar vests, \$1.50; four pockets, three buttons, full dress, \$1.35; black serge waiter's jackets, \$1.50; two welt pockets, French waiter's jackets, \$2.50; four button, round corner, no collar, duck coat, \$1.10; three pockets lined black coat, \$1.75; black hide stripe coat, 90 cents; three button, round corner, drill coat, 90 cents; five buttons, no sleeves, four pockets, white duck vests, \$1.00; four button round corner, no collar, duck coat, \$1.10; straight front, 23-24 inch long, black coat, \$1.50.

SHIRTS, PER DOZEN.

White shield, open front and back, \$1.25; percale shield, open front and back, \$1.20; pique shield, open front and back, \$1.50; white cambric negligee, \$1.20; pink and blue bodices, pique fronts, \$1.00; white, silk fronts, \$1.20; white India linen, \$1.50; white silk puff front, \$1.50; plain bosom, collars and cuffs attached, \$1.10; plain bosom, collar bands and detached cuffs, 90 cents; plain madras bands and detached cuffs, \$1.00; silk all over, \$3.00; fine black sateen and stripe, \$1.15; flannel all wool, \$1.30; percale pleated bosom collars and cuffs attached, \$1.10; percale pleated bosom detached collars and cuffs, \$1.00; percale shield, open front only, \$1.00; cuffs, pair, 20 cents; collars, 17 cents; common work shirts, medium weight, 65 cents; common work shirts, heavier weight, 70 cents; common negligee shirts, no pockets, 65 cents.

All boys' shirts to be paid the same as men's open front double stitched.

Blue flannel firemen's long double stitched yoke, felled shoulder seams, button piece and single stitched box pleat, two points, double stitched shield attached to shirt, \$1.85; double stitched box pleat, yoke and pocket and felled shoulder seams, 76 cents; single stitched front, single stitched yoke and felled shoulder seams, no pockets, 67 cents; double back and front, lower edges of pieces being double stitched, stitched box pleat, no point on yoke or pleat, \$1.25; double stitched box pleat, double stitched yoke and felled shoulder seams, 80 cents; cheap black sateens, double stitched box pleat, yoke and pocket and felled shoulder seams, 85 cents; single stitched front and shoulder seams, no yoke and no pocket, 60 cents; cotton corded shirt, double stitched front, single stitched yoke, plain sleeve, pocket, 85

GARMENT WORKERS—OTTUMWA.

The following agreement made and entered into this third day of July, 1902, by and between the Hardsoc Manufacturing Company and the Garment Workers' Union and which shall be in force until July 1, 1903:

1. All employees shall be members of the United Garment Workers of America and shall be in good standing in Local Union No. 148.
2. That sanitary conditions shall prevail in the shop; that heat, light and ventilation shall be regulated as well as may be practicable.
3. No one shall be discharged for working in the interest of the union but no one shall absent themselves from work without the permission of foreman or business office.
4. Sickness shall not be sufficient cause for discharge.
5. One apprentice shall be allowed for every four operators.
6. The company agrees in case of lack of business to keep the older employees to the newer ones, providing their merits are equal. It is also understood that the company has a right to discharge any employee who is not competent or who is not doing satisfactory work.
7. The hours for work shall be nine commencing at such an hour as may be mutually agreed upon.

8. Pay day shall be every two weeks.
9. The following scale of wages shall be paid: Clark overalls, per doz., \$1.12; miners' pants, per doz., \$1.06; miners' caps, per doz., 21½ cents; belts, 8 cents. Day work except apprentice work 10 cents per hour.
10. In case of any misunderstanding all members of the union shall remain at work while the same has been satisfactorily arbitrated and adjusted.

Hardsoeg Manufacturing Co.
Geo. B. Simmons, Secretary.
Edith Mudgitt,
Mary Doyle,
Mae Tanyer,
Mrs. Alice Spragg,
Executive Board.

GLOVE MAKERS—BOONE, IOWA.

1. To entitle an employer to the use of the Laborers' International Protective Union of America union label all employes must be members of unions affiliated with the Laborers' International Protective Union of America.
 2. The hours of employes shall not be more than nine per day; the hours to be set by the union and approved by the president of the Laborers' International Protective Union of America.
 3. The scale of prices adopted by the union shall be paid by the employer.
 4. The union rules shall be faithfully enforced by the employer.
 5. The employer shall not receive from the union more labels than are sufficient to cover the product for the ensuing week.
 6. The employer shall agree that should he, at any time, violate the rules under which the label is issued to him, he will not use any more of the union labels, but will surrender them to the union, or officer of the union, from whose hands he received them.
 7. The employer will not himself, nor permit any one for him, or in his behalf, have the label of the Laborers' International Protective Union of America imitated, duplicated or counterfeited in any way whatsoever.
 8. That should the employer desire to discontinue the use of the label he shall give one week's notice of the same to the duly authorized and accredited officer or representative of the union from whose hands he received the label.
 9. That it is the purpose of the employer, as well as the union, to faithfully carry out the above provisions in letter as well as in spirit.
 10. That this agreement shall be binding for a period of one year from date, or longer, unless terminated in accordance with the notice herein provided.
- Signed this first day of June, 1902.

C. S. Hansen, Glove Maker.
Laborers' Protective Union No. 14.
C. W. Sargent, President.

Attest: Victor E. Green, Secretary, Boone, Iowa.

GLOVE WORKERS AND CUTTERS—DES MOINES.

This agreement made and entered into between the J. H. Cownie Glove Company of Des Moines, Iowa, party of the first part, and Glove Workers' Union No. 10432 of the same place, affiliated with the American Federation of Labor, party of the second part, do hereby agree to the following articles, viz:

1. The party of the first part agrees to employ in the manufacture of gloves and mittens only competent union help in good standing with party of the second

part as long as they can be obtained, otherwise in the employment of experienced non-union help, that they may become members of the second part at their next regular meeting or declare same by sending in their application for membership. If no experienced help, either union or non-union can be obtained, then the party of the first part to hire whomsoever he pleases, they to become members of the party of the second part after they have been in the employ of the party of the first part for four months.

2. The party of the first part has a right to discharge any person or persons for poor work or misbehavior in and around his factory.

3. The party of the first part further agrees that all employes shall not be compelled to work more than fifty-nine hours per week, viz: from 7 to 12 A. M. and from 1 to 6 P. M., except Saturday afternoon from 1 to 5 P. M., and every Saturday afternoon off during the months of July and August. All overtime to be paid for at the rate of time and one-half, Sundays and holidays double time.

4. The party of the first part further agrees to pay all experienced cutters and operators by the dozen, as per prices hereto attached, and all finishers and turners to remain the same as before until stamp and label is procured, then they are to be subject to advance as their work may warrant. If any grievance it shall be referred to the executive board.

5. Party of the first part further agrees to furnish all tools and machinery used in the manufacture of his gloves and mittens free of charge, and to keep the same in good repair except when machines need repairs that have been made necessary by the negligence of the operator, and the operator to be familiar with the workings of his or her machine, and not to cause unnecessary repairs or adjustment. All wax thread operators to furnish their own machine, and keep same in repair. The party of the first part further agrees to furnish all machine operators without charge all belts, and belt hooks that they may require while in their employ, the same to be put on, and the machine put in working order. They further agree to furnish all operators with needles at actual cost. They further agree to deliver to the operators all work that there will be no delay caused by waiting for any goods, or any part of work required of them.

6. For the valuable foregoing privileges, the party of the second part agrees to furnish the party of the first part its union stamp and label upon all or part of the gloves and mittens manufactured by the party of the first part at cost.

7. The party of the second part further agrees to do all in its power as a labor organization to advertise the gloves and mittens of the party of the first part as union made, and bearing the stamp, and otherwise benefit its business, and further agrees to furnish the party of the first part a certificate bearing the stamp of the American Federation of Labor with the authority to make facsimile copies thereof for advertising purposes.

8. Should any differences arise between the party of the first part, and members of the party of the second part that cannot be settled between themselves, it shall be settled by arbitration. All grievances to be referred to the executive committee of this union. If no satisfactory arrangement can be made through this committee, then it is agreed that the grievance shall be referred to the grievance committee of trades council of Des Moines, and their decision shall be binding upon both parties.

This agreement shall go into effect on the 10th day of February, 1903, and terminate one year from date.

J. H. Cownie Glove Co.
John Jaques, President.

CUTTER'S PRICE LIST—All \$4.50 band top and gauntlets, complete, per dozen 20 cents; No. 216 shall be excepted and the price shall be 25 cents; clute, \$4.50; gauntlets, hand only, 15 cents; cuffs extra, 5 cents; all \$2.25 and \$3.00 band tops complete, 15 cents; all \$6.00 band tops, complete, 25 cents; all No. 1 horse, band tops complete, 35 cents; all No. 1 buck, band tops, complete, 45 cents; all \$6.00 gauntlets complete, 25 cents; all \$9.00 band top and gauntlet complete, calf, cow or goat, 80 cents; without cuffs or bands, 25 cents. All No. 1 horse palm sheep skin backs, complete per dozen, 30 to 35 cents.

All No. 1 horse palm, sheep back, complete, without bands or cuffs, 25 to 30 cents.

All Montpeller No. 1 horse, complete, 35 cents.

All Montpeller \$4.50 gloves, 20 cents.

The prices on all suede Montpeller gloves are to be agreed upon with the party or parties that shall be employed to do this work. It is further agreed that Ed Weigle receive the same price as other cutters, but when called upon to do other work during working hours, he shall be allowed 35 cents per hour, no charge shall be less than 15 cents.

John Jaques, President.

J. H. Cowrie Glove Co.

FINISHERS.

Cully to get \$9 per week, beginning March 13th; Goodwin \$8 per week beginning same time; further advances to be based on the price during two weeks' work.

J. H. Cowrie Glove Co.

Frank Cully.

FHarry Goodwin.

Harry Goodwin.

GYPSUM MINERS AND MILL WORKERS—FORT DODGE.

RULES AND REGULATIONS GOVERNING BETWEEN THE UNITED STATES GYPSUM COMPANY AND ITS EMPLOYEES AT FORT DODGE, IOWA.

We, the undersigned, agree to be governed by the following rules and schedule of wages remaining in effect up to and including December 31, 1903.

1. The price of mining, loading and delivery of rock to switch on cars, not to exceed 150 feet from face of room, shall be 45 cents per ton, in all the mines owned except in such mines where electric drills or other hand drills are used.

2. All entry work, of less than twelve feet in width, shall be considered narrow work and paid for extra on the following basis; from eight up to twelve feet in width at \$2.00 per yard with the addition of 50 cents per yard for every foot in width less than eight feet.

3. The privilege of turning room shall be given to the man who intends to work in the room after it is turned and he shall be paid the same yardage for the opening as applies to narrow work. No room is to be considered turned until it is twelve feet wide at the face, and if less than twelve feet wide he is to be paid only one-half of the amount allowed by the yardage scale, and the man taking up the work shall be allowed the balance.

4. Water in the mine shall be taken care of by the company when it interferes in any way with the miner's work.

5. All full lengths of track shall be laid permanently by the company and short lengths by the miners.

6. All timbering where necessary shall be done by the company, but miners shall cut the hitches and lend such assistance as has been customary heretofore.

7. All clay or mud handling shall be done by the company.

8. Timbering, company track work, clay or mud handling or pushing and mule driving shall be done by day work and be paid for on the basis of 25 cents an hour. The weigh men on top will be paid at the rate of 25 cents an hour.

9. Weight of cars hoisted in shaft shall not exceed 2,000 pounds and shall not be less than 1,700 as will be agreed upon by the company and the miners at each individual mine.

10. Rock loaded in the mine shall be of such size that it may be handled by one man and fed into a crusher or nipper without breaking.

11. The working day in the mine shall be an eight-hour day and it is definitely understood and agreed that an eight-hour day means eight hours' work in the

mine at the usual working places, and men employed in the mine shall put in a reasonable amount of overtime on request at the same scale of wages as herein agreed upon.

12. The company agrees to put in escape shafts in all mines in accordance with the laws of the state of Iowa now in force and regulating the coal mines of said state where it is deemed necessary for the safety of the miners and properly ventilating the mines, and also agree to keep all cages for hoisting men in a safe condition and proper repair.

13. The scale of wages for mill work up to May 15th inclusive, shall be as follows; per hour: Stone men, $17\frac{1}{2}$ cents; crusher men, 20 cents; buhr men, 20 cents; elevator men, $17\frac{1}{2}$ cents; mixers, $17\frac{1}{2}$ cents; warehouse men, $17\frac{1}{2}$ cents; calciners, $22\frac{1}{2}$ cents; kettlemen, $22\frac{1}{2}$ cents; coal shovelers, $17\frac{1}{2}$ cents; engineers, $22\frac{1}{2}$ cents; watchmen, $17\frac{1}{2}$ cents; boiler firemen, $17\frac{1}{2}$ cents.

From and after May 16th inclusive, the following scale will apply, per hour: Stone men, $18\frac{1}{4}$ cents; crusher men, $21\frac{1}{4}$ cents; buhr men, $21\frac{1}{4}$ cents; elevator men, $18\frac{1}{4}$ cents; mixers, $18\frac{1}{4}$ cents; warehouse men, $18\frac{1}{4}$ cents; calciners, $23\frac{1}{4}$ cents; kettle men, $23\frac{1}{4}$ cents; shovelers $18\frac{1}{4}$ cents; engineers, $23\frac{1}{4}$ cents; watchmen, $17\frac{1}{2}$ cents; boiler firemen, 20 cents.

From September 1st to December 31st inclusive, it shall be as follows: Stone men 20 cents; crusher men, $22\frac{1}{2}$ cents; buhr men, $22\frac{1}{2}$ cents; elevator men, 20 cents; mixers, 20 cents; warehouse men, 20 cents; calciners, 25 cents; kettle men 25 cents; shovelers, 20 cents; engineers, 25 cents; watchmen, $17\frac{1}{2}$ cents; boiler firemen, $22\frac{1}{2}$ cents.

14. The working day in the mill shall be a ten-hour day and mill employes shall put in a reasonable amount of overtime on request at the same scale of wages as herein stipulated.

15. Pay days are to be on the eighth and twenty-second of each month the time being figured from the first to fifteenth inclusive, and from the sixteenth to the end of month.

16. No change in the above schedule shall be made by the employes or the company unless thirty days' notice be given in writing by either party proposing such addition or alteration.

17. If any grievance arises either individually or collectively the company will meet either or any of its employes at any time in order to settle any such differences as may exist with a spirit of fairness to all concerned, and the employer agrees to be equally fair.

18. It being agreed between the parties hereto that a meeting between the company and its employes shall be held thirty days or thereabouts prior to the expiration of this wage scale to agree on a scale for the following year.

19. This agreement is made for the purpose of establishing a uniform scale of wages and it is definitely understood and agreed between the parties hereto, wherein the company agrees not to discriminate in any shape or form between union and non-union help in its employ, but reserves the privilege to employ or dismiss either when such employes in the opinion of the company are not properly performing their duty or when disturbing or antagonistic to other employes, or the company's interest; the said employes also agree not to discriminate or be antagonistic either to the employes of the company or their employer, the company agreeing not to refuse employment to any person or persons because they are union or non-union men.

It is understood that the company will only give employment to so many men and at such times as its requirements demand.

Testimony whereof the parties hereto set their hands and seal, in duplicate, this eleventh day of April, 1903.

Representatives for employer:

P. A. English, Manager.

J. T. Nydegger, President Local 9819.

Representatives for employes:

Arthur E. Holder, President I. S. F. of L.

HARNESS MAKERS—WATERLOO.

CONTRACT.

WATERLOO, IOWA, August 20, 1902.

To take effect this day and date and to remain in force until September 1, 1903. All work to be done in a first-class and workmanlike manner according to specifications and at prices named herein.

Any harness in jobs of one set only, to be paid for at an advance of 10 per cent on these prices.

Special jobs of harness or parts not named in this list to be paid for at 25 cents per hour for time necessary to complete the same by a first-class and competent workman.

SINGLE HARNESS, PER SET.

No. 5, make cheeks, 60 cents; No. 6, make cheeks, 65 cents; No. 7, make cheeks, 70 cents; No. 10, make cheeks, spring billets, \$1.25; No. 11, make cheeks, spring billets, \$1.40; No. 14, make cheeks, spring billets, \$1.45; No. 17, make cheeks, spring billets, \$1.15; No. 18, make cheeks, spring billets, \$1.20; No. 19, make cheeks, spring billets, \$1.25; No. 19½, make cheeks, spring billets, \$1.30; No. 7½, furnish cheeks, 70 cents; No. 8, furnish cheeks, 70 cents; No. 9, furnish cheeks, \$1.10; No. 9½, furnish cheeks, \$1.15; No. 12, furnish cheeks, 90 cents; No. 16, furnish cheeks, 85 cents; No. 15, furnish cheeks, spring billets, \$1.05; No. 23, make cheeks, \$2.00; No. 24, make cheeks, \$2.25; No. 25, make cheeks, \$2.50.

Firm to furnish cruppers and do all dieing and pressing on above harness, per set: Mecca single harness in 1-set lots, \$3.50; Mecca single harness in 6-set lots, \$2.75.

No. 1, furnish cheeks, per set, \$1.65; No. 07 make cheeks, \$1.70; No. 07½, make cheeks, \$1.92; No. 08, make cheeks, \$1.92; No. 09, make cheeks, \$2.53; No. 09½, make cheeks, \$2.75; No. 016, make cheeks, \$2.03; No. 012, make cheeks, \$2.03; No. 010, make cheeks, spring billets, \$2.42; No. 011, make cheeks, spring billets, \$2.91; No. 014, make cheeks, spring billets, \$3.30; No. 015, make cheeks, spring billets, \$2.42; No. 017, make cheeks, spring billets, \$2.42; No. 018, make cheeks, spring billets, \$2.47; No. 019, make cheeks, spring billets, \$2.58; No. 019½ make cheeks, spring billets, \$2.91.

Shaft tugs, breeching braces, winker braces, belly band (when doubled and stitched), spring billets, and one side of cheek to be machine stitched, also layer on crown piece of No. 1. Balance all hand made, six to inch, on all of above harness, firm to furnish cruppers.

DOUBLE BUGGY HARNESS, PER SET.

No. 151, make cheeks, \$1.70; No. 153, make cheeks, \$1.70; No. 161 make cheeks, make cruppers, \$8.00; No. 179, make cheeks, \$3.25; No. 165, make cheeks, \$2.50; No. 155, furnish cheeks, \$1.80; No. 157, furnish cheeks, \$1.90; No. 167, furnish cheeks, \$2.30; No. 257, furnish cheeks, \$1.90; No. 259, make cheeks, \$1.85; No. 265, make cheeks, \$2.27; No. 267, furnish cheeks, \$2.10.

Firm to furnish cruppers and do all dieing and pressing on above harness (except No. 161.)

Mecca in single set lots, per set, \$4.25; Mecca in single set lots, \$3.50.

No. 0151, make cheeks, per set, \$4.75; No. 0153, make cheeks, \$4.75; No. 0155, make cheeks, \$5.75; No. 0157 make cheeks, \$5.75; No. 0165, make cheeks, \$6.75; No. 0167, make cheeks, \$6.75; No. 0154 make cheeks, \$5.65; No. 0156, make cheeks, \$6.65; No. 0158, make cheeks, \$6.65; No. 0166, make cheeks, \$7.65; No. 0168, make cheeks, \$7.65.

Firm to furnish cruppers and do all dieing and pressing on above harness, all to be stitched six to inch, one side of cheeks to be machine stitched. Skirts, when doubled and stitched, to be stitched by machine.

Fitting flat traces, per set, 15 cents; finishing flat traces, 15 cents; finishing raised traces, lea, 20 cents; fitting raised traces, lea, 20 cents; extra for stitching raised traces, lea, 10 cents; extra for finishing raised traces hand, 05 cents.

TRACES, PER SET.

6 ft., all sizes, flat strap only, \$1.15; 6-2, all sizes, flat strap only, \$1.18; 6-4, all sizes, flat strap only, \$1.22; 6-6, all sizes, flat strap only, \$1.26; 6, all sizes flat strap only, \$1.15; 6-2, flat strap only, \$1.18; 6-4, flat strap only, \$1.22; 6-6, flat strap only, \$1.26; No. 051, 1½ and 1¾ complete, \$2.00.

Above all hand made, stitched five to inch.

HALTERS, PER DOZ.

All sizes, machine riveted, 50 cents; all sizes, hand riveted, \$1.00; all sizes, hand sewed, \$2.50; No. 17, shaft tug, 33 cents.

BEADED LINES, PER SET.

Double, with hand parts, \$1.90; single, with hand parts, 90 cents.

OVERCHECKS, PER DOZEN.

No. 7 and 8 creased, single, 3 buckle, \$95 cents; No. 9 round edge, single 3 buckle, \$1.10; No. 9 round edge, single, 5 buckle, \$1.50; No. 9 round edge, double, 4 buckle, \$1.25.

WATERLOO FRONTS, PER GROSS.

No. 1, all sizes, \$2.00; No. 2, all sizes, \$2.00; No. 3, all sizes, \$2.00; No. 4, all sizes, No. A, all sizes, \$2.75.

No. 040, hook and terret pad folds, set, 70 cents; No. 0140, hook and terret pad folds, 85 cents; rounds and lines on No. 0140 machine stitched.

LINES, DOZEN PAIR.

No. 6, 7-8, single, 60 cents; No. 9, single, \$1.20; No. 15-17-19, single \$1.80; No. 151, double, \$1.35; No. 155-157, double, \$1.50; No. 165-167, double, \$1.50.

BACK STRAP AND CRUPPERS, DOZEN.

No. 151-153-7½-8, 40 cents; No. 155-165-167, 60 cents.
Cruppers furnished by firm.

BACK, HIP, LAZY STRAP AND CRUPPERS, SET.

No. 045, 35 cents.

BACK, HIP, LAZY AND QUARTER STRAPS, SET.

No. 050, 52 cents; No. 050, front quarter straps, 10 cents; No. 050, trace-buckle billets, 10 cents; No. 045, trace buckle billets, 10 cents; No. 050, trace-buckle lead ups, 10 cents.

HAME STRAPS, ALL SIZES, GROSS.

Hand sewed, No. 50 buckle, \$2.50; Jones' attachment, No. 50 buckle, \$1.50; twin loops, No. 50 buckle, \$1.20; novelty loop, No. 50 buckle, \$1.20.

BELLY BANDS, DOZEN.

No. 165-167, 60 cents; No. 151-155, 60 cents; No. 7, grif. and wrap strap, 70 cents; No. 17, grif and wrap strap, \$1.00; No. 045-050, all hand, \$1.25 No. 045-050, machine center, 90 cents; No. 45-50, all machine, 70 cents.

HAME TUGS, SET.

No. 0177, no billet, 40 cents; No. 077, no billet, 55 cents; No. 0175, no billet, 40 cents; No. 075, no billet, 50 cents; No. 045, no billet, 50 cents; No. 0145, no billet, 40 cents; No. 050, double and stitched, no billet, 75 cents; No. 050, folded,

no billet, 65 cents; No. 0500 folded, no billet, 65 cents; No. 500, folded, no billet, 40 cents; extra for lacing, set, 10 cents; extra for lacing with eyelets, set, doubled and stitched, no billet, 45 cents; No. 151, doubled and stitched, 30 cents; No. 165, no billet, 35 cents; No. 179-177, no billet, 25 cents; No. 0179, no billet, 40 cents; extra for lacing, set, 10 cents; extra for lacing with eyelets, set, 15 cents.

BREECHING, SET.

No. 045, single strap, No. 50 buckles, 75 cents; No. 45, single strap, No. 50 buckles, 40 cents; No. 045 folded, No. 50 buckles 90 cents; No. 45 folded, No. 50 buckles, 45 cents; No. 050 folded, No. 50 buckles, 90 cents; No. 50 folded, No. 50 buckles, 55 cents; No. 050 single strap, No. 50 buckles, 75 cents; No. 50 single strap, No. 50 buckles 50 cents.

Above price is less side straps.

BRIDLES, PER DOZEN.

No. 200, \$4.25; No. 205, \$9.00; No. 210, \$15.00; No. 215, 2.30; No. 220, \$10.00; No. 161, \$11.20; Nos. 045 and 50 with dee, \$8.60; Nos. 045 and 050 open, \$4.50; Nos. 45 and 50, \$3.00; Nos. 45 and 50 blinds, no dee, \$4.50; Nos. 045 and 050 long cheek, \$6.10; Nos. 45 and 50 long cheek, no dee, \$4.00; No. 6, \$2.75; Nos. 7 and 8, make cheeks, \$2.75; No. 9, furnish cheeks, \$2.75; Nos. 10-15-17-18-19, make cheeks, \$4.35; No. 0, riding, 60 cents; No. 1, riding, 75 cents; No. 5, 90 cents; No. 10, 90 cents.

Rounds and winker braces machine stitched on team bridles. Extra for face piece on open bridles, dozen, 25 cents.

BREAST COLLARS, PER SET.

No. 125, 60 cents; No. 154, 60 cents; No. 156, 80 cents; No. 158, 80 cents; No. 166, 85 cents; No. 168, 85 cents.

BRIDLE ROUNDS, DOZEN.

No. 45, hand laps, 65 cents; No. 045, all hand made, \$1.00.

SIDE STRAPS, DOZEN.

No. 045, 35 cents; No. 050, 35 cents; creased buggy, 30 cents; round edge buggy, 30 cents.

WINKERS AND CHECKS, DOZEN PAIR.

Sewed in lap, \$1.20.

WINKER BRACES, PER GROSS.

Nos. 045 and 050, no dee, \$4.80; rd. buggy, no dee, \$3.80.

ROUND CHEEKS, PER GROSS.

Machine stitched, \$6.00.

CRUPPERS, PER GROSS.

$\frac{3}{4}$ round, \$3.50; $\frac{1}{2}$ round, \$4.00; No. 045 folded, No. 150 buckles, \$4.20; firm to do dieing on round cruppers.

LINES, PER SET.

Team, all sizes, \$3.00.

Hand part lap, 3 inch, stitched 6 to inch, all laps to be properly skived and finished and work done in such shape as to make an extra good piece of work, for which 50 cents extra is paid on above price.

SKIRTS, SET.

No. 045 folded, 45 cents; No. 0145, folded, 55 cents. Round bearers and liners on No. 0145, machine sewed.

BREAST STRAPS, DOZEN.

Team, all hand, 30 cents; buggy, round edge, machine sewed, 20 cents.

POLE STRAPS, DOZEN.

No. 155 buggy, round edge, machine sewed, 25 cents; team, all hand, 40 cents; team, lined at buckle, all hand, 45 cents.

WAGON YOKE STRAPS, DOZEN.

All sizes, hand sewed, 25 cents.

MARKET STRAPS, SET.

All sizes, hand sewed, 10 cents.

Team harness stitched with a five cord and five to the inch. All strap work to be made and finished same as parts of team harness, except special team lines.

ICE MEN OF CEDAR RAPIDS, IOWA.

AGREEMENT OF ICE MEN'S PROTECTIVE UNION.

CEDAR RAPIDS IOWA, July 19, 1903.

This agreement entered into on the first day of April, A. D. 1903, by and between Hubbard Ice Company, Incorporated; Chadma Bros.; E. T. Hooper and Sons; Joseph Klersey; Butchers Co-operative Ice Company, wholesale and retail ice dealers of Cedar Rapids, Iowa, and county of Linn, parties of the first part, and the organization known and recognized as the Ice Men's Labor Union No. 10176 of Cedar Rapids, County of Linn, State of Iowa, of the second part aforesaid, to wit: The various parties of the first part aforesaid, hereby agree to pay the following recorded weekly schedule of wages to individual practical ice men, viz: For the months of June, July, August, September and October, \$15.00 per week and for the months of April and May \$11.00 per week, and for the months of January, February, March, November and December \$9.00 per week; It is further agreed between the parties of the first part aforesaid and the parties of the second part aforesaid that helpers or common laborers shall receive weekly wages, schedule to be agreed upon and determined by the parties of the first part aforesaid. It is further agreed and stipulated between the contracting parties aforesaid that in event that there is not sufficient union labor at hand to successfully operate the various ice plants and deliveries, the parties of the first part aforesaid reserve the right to employ any useful non-union labor as the occasion may require to operate their business until such arrangements can be made agreeable to both contracting parties aforesaid. It is further agreed and stipulated between contracting parties aforesaid, that the hours of labor during the ice delivery season, viz: from the first day of April to the first day of November shall be from the hours of 3 A. M. until the hours of 6 P. M., as the occasion may require, except on Saturdays, to continue until deliveries and work is completed for the day. It is further agreed between the contracting parties aforesaid that the party of the first part shall pay the party of the second part individually 25 cents per hour for overtime or Sunday work, and forty-five (45) minutes to constitute an hour. It is further agreed and stipulated between the contracting parties aforesaid, that all differences that may arise at any or all times shall be submitted to a board of arbitration.

J. L. Behel, Recording Secretary.

1101 N. 10th street West, Cedar Rapids, Iowa.

LAUNDRY WORKERS' INTERNATIONAL UNION AGREEMENT.

This agreement, entered into this the twenty-sixth day of August, 1902, by and between The Hawkeye Laundry, hereinafter known as the employer, and the Shirt, Waist and Laundry Workers' International Union, headquarters, Troy, N. Y., hereinafter known as the Union.

Witnesseth, that in consideration of the use of the union trade label or stamp the employer agrees to abide by the following conditions:

1. The Employer agrees to employ none but good standing members of the Union in each branch or department.

2. That in accordance with state laws relating to workshops, all sanitary conditions shall be observed.

3. *Ten hours shall constitute a day's labor. No reduction in wages to be made on account of reduction of hours of labor.

4. The employer shall abide by the union conditions as entered into and agreed upon in each branch or department.

5. It is mutually agreed that the union will not cause or sanction a strike, or the employer will not lock out his employes while this agreement is in force.

6. All questions of wages or conditions of labor which cannot be mutually agreed upon shall be submitted to a board of arbitration composed of one person to represent the employer and one person to represent the union, these to select a third member of the board.

7. The decision of a majority of this board shall be final and binding on the employer, the employes, and the union.

8. Said label or stamp is the property of the union and shall be in possession of a member designated by the union. It is further agreed that on the discontinuance of this contract, the employer agrees to return all labels, cuts or stamps furnished without cost to the union. And to surrender all claims to their further use.

9. The union on its part agrees to exert its power as a labor organization to advertise and to make all reasonable effort to benefit the business of the employer.

10. This agreement shall not be transferable.

11. This agreement shall remain in force until August 26, 1907. Should either party desire to alter, amend, or annul this agreement, they shall give a written notice thereof three months prior to the expiration of the term of this agreement.

Signed by:

G. A. Johnson, for Employer.
Chas. E. Nordeck, for International Union.

At a legal meeting of Local Union, No. 138, the foregoing contract was approved.

Signed for Local Union:

R. W. Duckworth, President.
Cora E. Siverly, Secretary.

*Hours were reduced from 10 to 9 per day, February 7, 1903.

LAUNDRY WORKERS—BOONE.

SCALE OF WAGES AND HOURS IN BOONE LAUNDRIES—Engineers and washers, \$2.00 per day; starchers, 11 cents per hour; ironers—plain—11 cents per hour; ironers—shirt—\$2.00 per day; driver, \$2.50 per day. Nine hours constitute a day's work with pay for overtime.

LAUNDRY WORKERS—OELWEIN.

SHIRT, WAIST AND LAUNDRY WORKERS' INTERNATIONAL AGREEMENT.

This agreement entered into this twentieth day of April, 1903, by and between G. R. Spensley, hereinafter known as the employer, and the Shirt, Waist and Laundry Workers' International Union, headquarters, Troy, N. Y., hereinafter known as the union.

Witnesseth, that in consideration of the use of the union trade label or stamp the employer agrees to abide by the following conditions:

1. The employer agrees to employ none but good standing members of their union in each branch or department for permanent employment.

2. That in accordance with state laws relating to workshops, all sanitary conditions shall be observed.

3. (....) hours shall constitute a day's labor. No reduction in wages to be made on account of reduction of hours of labor.

4. The employer shall abide by the union conditions as entered into and agreed upon in each branch or department.

5. It is mutually agreed that the union will not cause or sanction a strike, or the employer will not lock out his employees while this agreement is in force.

6. When necessary a properly accredited officer or representative of the International union shall be allowed to inspect the shop conditions and use of the label, etc., in factory or laundry.

7. All questions of wages or conditions of labor which cannot be mutually agreed upon shall be submitted to a board of arbitration composed of one person to represent the employer and one person to represent the union, these to select a third member of the board.

8. The decision of a majority of this board shall be final and binding on the employer, the employees, and the union.

9. Said label or stamp is the property of the union and shall be in possession of a member designated by the union. It is further agreed that on the discontinuance of this contract, the employer agrees to return all labels, cuts or stamps furnished, without cost to the union. And to surrender all claims to their further use.

10. The union on its part agrees to exert its power as a labor organization to advertise and to make all reasonable effort to benefit the business of the employer.

11. This agreement shall not be transferable.

12. This agreement shall remain in force until March 1, 1904. Should either party desire to alter, amend, or annul this agreement, they shall give a written notice thereof three months prior to the expiration of the term of this agreement.

13. Females to work nine hours per day. Males ten hours per day. All time put in over that to be paid at time and one-half.

Signed by:

G. R. Spensley,

For Employer.

Chas. E. Nordeck,

For International Union.

At a legal meeting of Local Union No. 165, the foregoing contract was approved.

Maude E. Carpenter,

President.

C. A. Brinkerhoff,

Secretary.

For Local Union.

MINIMUM SCALE IN CUSTOM LAUNDRIES.

WEEK WORK—Machine operators and assorters, not less than \$9.00; markers, not less than \$5.25; washer, not less than \$12.00; starchers, not less than \$6.00; forelady on mangle, not less than \$5.75; helpers, \$3.50; drivers, \$10.00 and commission.

MACHINE IRONING—Bosoms, \$6.00 per week; body, \$5.25 per week.

Plain ironers and shirt machine ironers to have half holiday on Mondays. In slack time hours and not force to be reduced. All holidays are to be paid for at the rate of time and one-half.

Signed by

G. R. Spensley,

For Employer.

Maude E. Carpenter,

For Union.

MACHINISTS.

SCHEDULE OF RULES AND WAGES OF MACHINISTS OF THE C., M. & ST. PAUL RAILWAY SYSTEM.

1. Any man who has served an apprenticeship or had four years of varied experience at the machinist's trade, and by his skill and experience becomes qualified and capable of fitting together the metal parts of a locomotive or any machine, and is competent to do the shaping, or boring, or turning, or skilled drilling, or finishing and adjusting the metal parts of any machine whatsoever, shall constitute one of the several classes of machinists.

2. Machinists' work shall be performed by machinists or apprentices to the machinists' trade, except in cases of emergencies, where such emergency shall not become a practice.

3. The fitting, adjusting, shaping and boring, skilled drilling, turning, planing, finishing or the dissembling of the parts of a locomotive or machine, shall be considered machinist's work.

4. Applicants for employment as machinists for this company shall be only expected to file application information, relative to character and ability, and the address of relatives.

5. No machinists shall be laid off any hours of the regular time to equalize time, on account of having worked overtime.

6. Helpers, when used in any way in connection with machinists' work, shall in all cases work under the orders of the machinists who must keep them advantageously employed, both working under the direction of the foreman.

7. Helpers shall not be advanced to the work of apprentices or machinists unless they are in every way qualified, sign the apprentices' schedule and at the rate of apprentices' wages.

8. Machinists sent out on the road shall receive straight time for the time from which they are called to leave until they return, and time and one-half for overtime worked, the overtime hours based on the hours of the overtime at the home station. If, during the time on the road, there be an opportunity to go to bed for five hours or more, such time shall not be paid for.

9. Overtime, other than running repairs, shall be avoided as much as possible, and especially more than three nights per week and two consecutive Sundays.

10. When practicable round house foremen shall so arrange the work with machinists, so that each man may have every other Sunday off.

11. When it becomes necessary by the company to reduce expenses the full force of machinists shall be retained and the hours reduced until not more than eight hours will be worked; any further reduction, if men are then to be laid off: then the last employed in the order of their employment will be the first laid off, ability being equal.

12. Men in direct charge of machinists' work (when practicable) shall themselves be machinists. Any man now filling the position of foreman under date of adoption of this schedule shall not be affected by this rule.

13. All time over the regular working time, Sundays and holidays as follows: New Year's Day, Lincoln's Birthday, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas, shall be paid for at time and half rates.

14. If any of the holidays mentioned in this schedule fall on Sunday, then the day to be observed by the state, nation or by proclamation, shall be considered a holiday and paid for as such.

15. Nine (9) hours shall constitute a day's work. (To be held in abeyance.)

16. Machinists called to work overtime, and such work shall be three hours and twenty minutes, or less, shall receive five hours' pay. If more than three hours and twenty minutes, then time and one-half will be paid.

17. There may be one apprentice to each shop, regardless of the number of journeymen employed not to exceed one additional for each five journeymen hereafter.

18. All apprentices must be indentured, and shall be furnished with duplicate copy of indenture by the company.

19. Applicants for apprenticeship shall not be less than sixteen and not more than twenty-one years of age. They must have a grammar school education.

20. Graduates of technical schools, who have entered such schools prior to the age of twenty-one years, may enter the service of this company as apprentices with the same indiscriminating consideration as other apprentices in the second year of service.

21. Apprentices shall serve four years and shall not in any case leave the service of the company without good and just cause, except, however, that should he prove unqualified during the first six months, he may quit or the company may transfer or dismiss him.

22. The company will furnish all opportunity possible for the apprentice to secure a complete knowledge of the machinist's trade during his apprenticeship. (He may serve three years on the different machines and special jobs and he shall not serve more than six months on any one machine or special job, and one year on the floor.)

23. No apprentice shall be permitted to work overtime or on night shifts during the first three years of his apprenticeship, except in emergencies.

24. No apprentice shall be sent out on the road during his apprenticeship except to secure information on the trade.

25. Rates of payment for apprentices for the first year shall be 8 cents per hour; second year 10 cents; third year, 12 cents; fourth year, 16 cents.

26. Apprentices having finished their apprenticeship shall receive journeymen's pay if retained in the employ of the company.

27. The rate of pay for competent machinists in the shops and round houses of the C. M. & St. Paul Railroad Company shall be, in Chicago, 35 cents per hour, Minneapolis 34½ cents per hour and all other points 34 cents per hour.

28. After commencing work, machinists will not be allowed to leave the premises until the regular hour of closing work without permission from the foreman. Machinists wishing to be absent one day or more must obtain leave of absence from the foremen.

29. In case of any grievance, the same shall be presented either individually or by committee to the proper official of the company. The course of procedure will be first, to present the matter in writing to the foreman of the shop and in case a satisfactory adjustment cannot be made, to present the same in writing to the master mechanic of the company, superintendent of motive power, general superintendent and general manager in the order named. Grievances presented as above provided will be promptly acted upon and remedied and no discrimination will be permitted against any one on account of serving on such committee.

30. These rules and schedules shall be in force for one year from August 28, 1903, and thereafter provided, however, that after the first year changes may be

made by either party giving thirty days' notice to the other of changes desired, by conference.

C., M. & St. P. Railroad,
A. E. Manchester, Superintendent Motive Power.
E. Britigan,
W. M. Antill,
Chas. W. Wood,
Charles Robinson,
Frank Healey,
Committee.

D. W. Roderick,
Attorney for Machinists.

NOTES OF EXPLANATION IN CONNECTION WITH SCHEDULE.

Rule 3 was accepted as it reads with the understanding that the stripping of engines in Milwaukee will be done by two machinists assisted by as many helpers as necessary to do the work.

Rule 27 shall be understood to mean that machinists in Chicago who are now receiving 30 cents per hour shall hereafter receive 35 cents per hour, machinists at Minneapolis now receiving 80 cents per hour shall hereafter receive 34½ cents per hour. At all other points machinists receiving 30 cents or more per hour shall hereafter receive 34 cents per hour. Machinists who are now receiving less than 30 cents per hour will have their pay advanced 10 per cent; machinists rated at less than 30 cents per hour after the adoption of this schedule and who upon investigation and proven to be entitled to further increase shall receive such increase as ability shall warrant as high as the maximum rate. The rate at which machinists shall be employed in the shops shall be the standard rate of the place for which they are employed. (Not less than the standard of that particular shop or round house.)

MACHINISTS AGREEMENT ON CHICAGO, NORTH-WESTERN
RAILROAD.

1. Any man who has served an apprenticeship or has had four years of varied experience at the machinist trade and by his skill and experience be qualified and capable of fitting together the metal parts of a locomotive or any machine, and is competent to do shaping, boring, turning, or skilled drilling, finishing, adjusting any parts of any machine whatsoever, shall constitute a machinist.

2. Machinists' work shall be performed by machinists or apprentices to the machinists' trade.

3. The fitting, adjusting, shaping, boring, skilled drilling, turning, planing, finishing, or the dissembling of the parts of a locomotive or machine shall be considered machinists' work.

4. Applicants for employment as machinists for this company shall only be expected to file application information, relative to their character and ability, with the address of relatives.

5. No machinist shall be laid off any hours of the regular time to equalize time, on account of having worked overtime.

6. Helpers when used in any way in connection with the machinists' work shall in all cases work under the orders of machinists; both being under the direction of the foreman.

7. Helpers shall not be advanced to the work of apprentices or machinists, unless they are in every way qualified, and sign the apprentice schedule, at the apprentice rate.

8. Machinists sent out on the road shall receive straight time from the time called until returned; time and one-half for overtime worked on overtime hours,

based on the hours of overtime at the home station. He shall receive also not to exceed (except in case of emergency) \$1.00 per day for necessary expenses.

9. Overtime, other than running repairs, shall be avoided as much as possible and especially not more than three nights per week and two consecutive Sundays for each or any machinist.

10. When practical, round house machinists may so arrange their work with their foremen, so that each man may have every alternate Sunday off.

11. When it becomes necessary for the company to reduce expenses the full force of machinists shall be retained and the hours reduced until not more than eight hours per day shall be worked; any further reduction, if found necessary for men to be laid off the last employed in the order of their department will be the first laid off.

12. Men in direct charge of machinists, or machinists' work (when practicable) shall be machinists.

13. All time over the regular working time, Sundays, New Year's, Decoration Day, Fourth of July, Labor Day, Thanksgiving and Christmas, shall be paid for at the rate of one and one-half time.

14. Any of the holidays mentioned in this schedule falling on a Sunday, the day observed by the state or nation shall be considered a holiday, and paid for as such.

15. Nine hours shall constitute a day's work.*

16. Machinists called to work overtime, and such work shall be three hours and twenty minutes or less, he or they shall receive five hours' pay. If more than three hours and twenty minutes, then time and one-half shall be paid.

17. There may be one apprentice to each shop regardless of the number of journeymen employed, and not to exceed one additional for each five journeymen thereafter.

18. All apprentices must be indentured, and shall be furnished with duplicate copy of indenture by the company.

19. Applicants for apprenticeship shall not be less than sixteen years and not more than twenty-one years of age. They must have a grammar school education.

20. Graduates of technical schools, who have entered such schools prior to the age of twenty-one years may enter the service of the company as apprentices with the same indiscriminating consideration as other apprentices in the second year of service.

21. Apprentices shall serve four years and shall not in any case leave the service of the company without good and just cause, except, however, that should he prove unqualified during the first six months, he may quit or the company may transfer or dismiss him.

22. The company will furnish all opportunity for apprentices to secure a complete knowledge of the machinists' trade during his apprenticeship.

23. No apprentice shall be permitted to work overtime or on night shifts during his apprenticeship.†

24. No apprentice shall be sent out on the road during his apprenticeship except on a dynamometer car, or to secure information on the trade.

25. Rates of pay for apprentices shall be for the first year 8 cents per hour; second year, 10 cents; third year, 12 cents; fourth year, 15 cents.

26. Apprentices having finished their apprenticeship and being qualified to perform the same work, quality and quantity as journeymen, shall receive journeymen's pay.

27. The rate of pay for competent machinists in the shops of the C. & N. W. R. R. shall be 34 and 35 cents per hour in Chicago, at all other points on the system 34 cents per hour.

28. After commencing work, machinists will not be allowed to leave the premises until the regular hour of closing work without permission of the foreman, and

*This rule is temporarily open.

†This does not mean that if on a job at quitting time and when working with a machinist and that particular job is in a hurry, he may not be allowed to finish same.

notice to the timekeeper; machinists wishing to be absent two or more days must obtain leave of absence from the foreman.

29. Grievances must be presented within thirty days after occurring and if not adjusted within similar time may be appealed to the master mechanic and superintendent of motive power, etc.

30. This wage schedule takes effect June 1st.

31. These rules and schedules shall be in force for one year from June 1st, and thereafter, provided, however, that, after the first year, changes may be agreed upon by either party giving thirty days' notice to the other party of changes desired for conference.

R. Quayle,
Superintendent Motive Power and Machinery.
W. McIntosh,
R. B. Logan,
Committee.
D. W. Roderick,
Attorney for I. A. of M.

MACHINISTS AGREEMENT ON ILLINOIS CENTRAL RAILROAD, ADOPTED AND APPROVED JUNE 10, 1903.

1. Any man who has served an apprenticeship or had four years of varied experience at the machinists' trade, and by his skill and experience be qualified and capable of fitting together the metal parts of any machine, and is competent to do shaping, boring, turning, finishing and adjusting the metal parts of any machine, whatsoever, shall constitute a machinist.

2. Machinists' work shall be performed by machinists or apprentices to the machinists' trade, the master mechanic to determine the class of work. Steam pipe work and stripping of engines is to be considered machinists' work.

3. Applicants for employment as machinists shall only be expected to file application as to character and ability and address of relatives.

4. After commencing work, machinists will not be allowed to leave the premises until the regular hour of closing work without permission of the foreman in charge and notice to the timekeeper. Machinists wishing to be absent two or more days must obtain leave of absence from the foreman.

5. There may be one apprentice to each shop, regardless of the number of journeymen employed, and not to exceed one apprentice to each five journeymen employed additional to each shop.*

6. Applicants for apprenticeship must be between the ages of sixteen and twenty-one, and must be able to read and write and understand the rudiments of arithmetic.

7. Graduates of technical colleges who have entered such class prior to the age of twenty-one may enter the service of the company as special apprentices; the term of service to be two years, and shall receive the same indiscriminating consideration as other apprentices in the third year of actual service.

8. Regular apprentices shall be indentured for four years, and shall not in any case leave the service of the company without good and just cause, except, however, that should they prove disqualified during the first six months, they may quit during that time or the company may transfer or dismiss them from the service.

9. The company will furnish all opportunities possible for the apprentices to secure a varied and complete experience during his apprenticeship.

10. No regular apprentice shall be asked to work overtime or on night shift during the first two years of his apprenticeship.

11. Overtime other than running repairs shall be avoided as much as possible, and especially more than three nights a week or two consecutive Sundays.

12. Where possible, round house machinists may so arrange or divide work so that each man may have every other Sunday off.

*This rule is held in abeyance.

13. Regular shop machinists sent on the road and away from their home station shall receive straight time from the time called until returned to home station and overtime for work done during overtime hours with allowance not to exceed one dollar per day of twenty-four hours for expenses.

14. When it becomes necessary to reduce expenses, full force of men shall be retained and reduction made in the number of working hours until the hours shall have reached eight, and then further reduction shall be made by the dismissal of men last employed, ability and merit being equal.

15. Any machinist failing to report for work at the regular hour must first report to the timekeeper and his foreman. He will then commence work at the next half hour.

16. All time over the regular working time, Sundays and holidays as follows: New Year's, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas, shall be paid for at the rate of time and a half.

17. Any of the holidays named in the schedule falling on Sunday the day selected by the state or nation instead for celebration, shall be considered a legal holiday.

18. Machinists called to work overtime where such work shall be three hours and twenty minutes or less shall receive five hours' pay.

19. Nine hours shall constitute a day's work.*

20. The rate of pay for competent machinists in the shops of the Illinois Central Railroad System shall be 34 and 35 cents per hour in Chicago; at all other points on the system, 34 cents per hour.

21. The rate of pay of machinist apprentices shall be as follows: First year of service, 10½ cents per hour; second year of service, 11½ cents per hour; third year of service, 12½ cents per hour; fourth year of service, 13½ cents per hour.

22. Apprentices having finished their apprenticeship and being qualified to perform the same work, quality and quantity, as journeymen, shall receive journeymen's pay.

23. The rate of pay for gang foremen at Chicago shall be 37½ cents per hour. The rate of pay for gang foremen in shops outside of Chicago on the system shall be 36½ cents per hour.

24. The grievance of any employe which he cannot adjust with the foreman may be appealed by him to the master mechanic, superintendent or superintendent of machinery.

25. Any matter or subject of grievance must be presented for consideration within thirty days after its occurrence and unless adjusted within similar time, may be appealed. All appeals must be in writing.

26. There shall be no discrimination by the company against any person or committee for representing a grievance or acting for others in the adjustment thereof.

W. Renshaw,
Superintendent of Machinery.

Approved:

D. W. Roderick,
Mgr. Mld. Ass'd. Dists. I. A. of M.

Accepted by committee:

C. M. Stark.
F. Connor.

AGREEMENT BETWEEN THE IOWA CENTRAL RAILWAY COMPANY AND
MARSHALL LODGE NO. 299, OF THE INTERNATIONAL ASSOCIA-
TION OF MACHINISTS OF THE CITY OF MARSHALL-
TOWN, IOWA.

ARTICLE I.

1. A machinist shall be either a competent floor hand, general workman, lathe hand, vise hand, planer hand, milling machine hand, slotter machine hand, boring mill hand, shaper hand, tool and die maker.

*This rule is held in abeyance.

2. If an expert on a specialty, such as building and maintaining in a workmanlike manner the important details that make up air-brake apparatus, as applies to the locomotive, shall be known as a machinist.

3. The minimum rate of wages shall be 32 cents per hour.

4. Ten hours shall constitute a day's work. All overtime worked by regular day machinists and apprentices between 6 P. M. and 7 A. M., and Sundays and legal holidays and all work performed by regular night machinists between 7 A. M. and 6 P. M., and all Sundays and legal holidays shall be paid for at the rate of time and one-half. Legal holidays shall be New Year's, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas.

5. Machinists' work shall be done by a machinist and machinists' apprentices. Handy-men shall not be advanced to the detriment of either of the above mentioned.

APPRENTICES.

1. Apprentices shall be as follows: One for the shop irrespective of the number of machinists employed; one apprentice for every five machinists thereafter; special apprentices to be governed by the above ruling. Apprentices shall serve four years' apprenticeship, and shall be given ample opportunity to become proficient, and a letter showing each apprentice to have served his full time shall be given at the expiration of his apprenticeship.

2. No apprentice shall be allowed to start before the age of sixteen years nor after the age of twenty-one.

ARTICLE II.

1. When it becomes necessary to reduce expenses, the full force of machinists shall be retained and reduction made in working hours until the reduction has reached eight hours; then further reduction shall be made by dismissing the single men and retaining the married men.

2. A shop committee shall be recognized in case of grievances arising, and the company agrees that no discrimination shall be made whatsoever.

3. When requested, the company will grant leave of absence to machinists who desire to go before the management for adjustment of grievances.

4. In case of grievances or disputes arising between the employes and their superior officers, it is understood that the employes have the right to appeal to the highest officer connected with the road.

ROAD WORK.

When machinists are called upon to work out on the road they shall receive straight time in going and returning; one and one-half time shall be allowed while actively employed, actual expenses to be allowed.

This agreement to take effect July 1, 1903.

Thirty days' notice shall be given by either party to this agreement to the other for a desire to change or renewal of same.

These conditions to govern Oskaloosa and Monmouth shops.

Jos. Mohr.

J. D. Reynolds.

Edw. White,

Andris Folsom,

Committee.

W. O. Johnson,

Master Mechanic.

Geo. D. Brooke,

Superintendent M. & E.

Arthur E. Holder,

Machinist Representative.

METAL MECHANICS—OTTUMWA.

Following is the label agreement signed by the Nicholls Manufacturing Company, of Ottumwa, Iowa. This firm manufactures carpenter's squares and is complying with the rules and regulations of the joint union label:

MEMORANDUM OF AGREEMENT.

OTTUMWA, IOWA, August 26, 1902.

Mr. Martin Hardsocg, representing The Nicholls Manufacturing Company, does hereby make application for the use of the union label, issued jointly by the International Association of Machinists, the Metal Polishers, Buffers, Platers, Brass Workers and the International Association of Allied Metal Mechanics (all hereafter to be known as parties of the second part), through their representatives and in consideration of the use of the said union label, the said Nicholls Manufacturing Company (hereafter known as the party of the first part) agree to conform to the following:

1. That none but members in good standing of the parties of the second part shall be employed by them.
2. That the rules of the parties of the second part relative to the working of their members shall be observed.
3. That in all disputes and disagreements, the parties of the first part agree to deal with the various shop committees on their highest authority.
4. That the said union labels shall be placed on the product manufactured by the parties of the first part, at their expense (for time only), and in such place as the parties of the second part shall specify.
5. That the parties of the second part shall at all times have full charge of, and the handling of the unused union labels.
6. The parties of the second part are to be the judges as to whether the above terms are faithfully complied with, and in the event of their violation, or of dispute between the parties hereto, it is agreed that the parties of the second part shall have the undisputed right to withhold their union labels.

And in consideration of the faithful performance of and compliance with the above, the parties of the second part agree as follows:

1. To supply all union labels needed for actual use only, free of cost for printing or paper.
2. To use their influence to have their members in the employ of the parties of the first part serve faithfully.
3. To advertise and promote the sale of that part of the product of the parties of the first part bearing the said union label, over and above that of those firms who do not use the union label, a true copy of which is herewith affixed.

This agreement shall be in full force and effect from above date, and shall only be terminated by a violation or by thirty (30) days notice in writing by either of the parties hereunto. Fifty-four hours shall constitute a week's work, all over that to be paid at time and half rate.

The minimum rate for machinists to be 28 cents an hour.

Signed by parties of the first part:

Nicholls Manufacturing Co.,
Per Martin Hardsocg.

By T. F. Norfolk.

Signed by parties of the second part.

Moses Nicholls, President Allied Metal Mechanics.
A. L. Love, President Machinists.
P. G. Drummond, President Blacksmiths.

MINERS OF IOWA.

SCALE AGREEMENT MADE BY THE OPERATORS OF IOWA AND THE UNITED MINE WORKERS OF DISTRICT THIRTEEN, EFFECTIVE APRIL 1, 1903, UNTIL APRIL 1, 1904.

At a joint conference of the United Mine Workers of America and the Iowa Coal Operator's Association held at Des Moines, Iowa, March 27, 1903, the following scale, rules, regulations and agreements were entered into and adopted for District Thirteen for the year beginning April 1, 1903, and ending March 31, 1904.

The price to be paid for pick mined coal in the various sub-districts named below, of said District Thirteen, during the year commencing April 1, 1903, and ending March 31, 1904, shall be as follows: Per ton of two thousand pounds, at the option of the operators, as to mine run or lump coal, provided that only such coal as is sold as mine run shall be paid for on that basis, unless otherwise agreed upon between the state board of the U. M. W. of A. and the operator of the mine.

All of the screens in the different fields shall have not to exceed seventy-two square feet of superficial area, free from obstructions, and the bars of each screen shall rest upon a sufficient number of bearings to hold the bars in proper position. No screen provided for in this agreement shall be more than twelve feet in length, except those now in use, nor have anything on or near it, which will impede the progress of the coal over the screens, provided further that the screens in the several sub-districts shall be made as follows:

SUB-DISTRICT NUMBER ONE.

The screens shall be of flat bars of not less than five-eighths of an inch surface and not to exceed one and one-fourth inches between the bars, except in Putnam county Mo., which shall be on an absolute mine run basis. Hand picked coal shall be considered as screened lump coal.

Mine run coal Putnam county, Mo., per ton, 89%; mine run coal K. C. track in Iowa, per ton, 92 3-10.

And that a commission shall be appointed by President. C. H. Morris of the Iowa Coal Operators' Association and President Edwin Perry of District No. 13 of the U. M. W. of A. to investigate the conditions in Putnam county, Mo., and decide whether the coal in any mine therein is deficient or not, if it is deficient, they shall fix the price per ton that shall cover the deficiency. The price to be effective from April 1, 1903.

Screened lump coal, per ton, \$1.05; eight foot entry, per yard, \$1.72; twelve foot entry, per yard, \$1.35; fourteen foot entry, per yard, \$1.30; room turning, twelve to fourteen foot doorway, each, \$2.25; double shifting entries, 25 cents per yard extra.

LEE MACHINE—PER TON.

Machine runners, 7¼ cents; machine shovelers, 7¼ cents; loaders, 55% cents.

CENTERVILLE MINES.

Legg Machine Runners, per foot, 40 foot room, .2227; entry, .0729; extra cuts .0762.

Legg Machine Shovelers, per foot, 40 foot room, .1807; entry, .0593; extra cuts .0705; Harrison runners, double rib, .0959; Harrison shovelers, double rib, .0718; Harrison runners, \$2.80 per day; loaders, 49% cents per ton; head track layers per day, \$2.56; pipe men, per day, \$2.50; drivers and trip riders, per day, \$2.44; cagers, per day, \$2.44; boy couplers, per day, \$1.52; ollers and trap-pers, per day, \$1.13 pushers and all other inside labor, per day, \$2.36.

Boy drivers may be used between partings but when used at regular switching they shall be considered as men and receive men's wages.

TOP LABOR.

Box car and top men per day, \$1.80; but in no case shall a reduction from present wages be made on any man now receiving more than \$1.80 per day.

Outside drivers, for outside work only, and mine teamsters, per day, \$1.80; sinkers, per day of eight hours, \$2.70.

Price of smithing shall be one per cent of the gross earnings, provided that miners' tools be given preference over all other work done by the blacksmith, and the tools shall be sharpened in a workmanlike manner.

That in accordance with the state law the company shall furnish all the necessary timbers and the miner shall keep his room securely propped. If the miner working in the room fails to securely prop the same, or neglect to prop as directed by the pit foreman or to build his road wall within three feet, or his gob within four feet, of the working face, provided he has material to gob with, he may be discharged. If the miner is discharged, and he is not satisfied with the decision of the mine foreman, an appeal may be taken as provided for in Resolution No. 8 of this agreement.

In any mine where the company does the brushing the miner shall deliver his coal and receive his empty car at his switch; it is also further agreed that two men may work on one road under this agreement. It is also agreed that the miner shall be responsible for his working face up to the cap rock, except falls caused by the slips or on account of mines being idle, and falls caused by first break in circle work, and in front of the roadway outward to the inside corner of his last roadwall, and when a fall occurs on the roadway outward from the end of the roadwall, exceeding one car of dirt, the pit boss shall upon being notified, see that such fall is removed.

The company may run the machine double shift when necessary, on account of delays from breakage or unavoidable causes, or it may run one shift each twenty-four hours, whether it is during the time the mine is running coal or during the intervening time, provided that one machine crew work not to exceed forty-eight hours in one week, when the mine runs every day and when the mine is not working full time, they may run the machines as many hours as the pit runs each week.

The machine shovelers shall remove the dirt cut by the machine from under the coal and clean up the place for the loaders. The mining shall be done in the clay and as thin as practicable to clear the dutchman. In case of falls or slips on the face, and the loader and the pit boss cannot agree on the price for cleaning it, the company may load the place out with company men. Company or machine men may load deficient coal when loader and pit foreman cannot agree on a price for same. Loading of bump coal to remain the same as heretofore. The same responsibility of care of place shall apply to loaders as to miners except when the place is loaded out and cleaned up and accepted by the company, then the loader's responsibility ceases until he takes the place again. Where machine and pick miners work together in the same mine, the turn shall be made equal in dollars and cents.

Corner Cutting.—Corner cutting on longwall shall be 63 cents per yard and corner cutting in semi-longwall shall be 63 cents per yard for all permanent corners. What is considered a permanent corner is the corner next to main entry and the corner next to head of cross entry. Should a room at any time be more than seven feet ahead of the inside room the miner shall be given a place to work until the inside room is caught up.

There shall be iron track in all places where one man cannot push out and in all back entries; not more than two roads shall be permitted on air course for each cross cut; miners shall not be required to turn loaded cars on wooden platforms. In room and pillar work the miner is to deliver his loaded car and receive his empty car as heretofore.

The depth of rooms in room and pillar work shall be not more than 150 feet; in longwall work not more than 125 feet, except by mutual consent.

Brushing.—The minimum price for brushing in eight foot entries shall be 53 cents per yard.

Crib Building.—The price for building cribs from clay to slate shall be 63 cents each, the company to have the option of doing same, but where built by the company the miners shall not be delayed in their work.

Black Bat.—Black bats over three inches thick shall be considered as deficient work and paid for according to Resolution No. 10.

SUB-DISTRICT NUMBER TWO.

The screens shall be of flat or akron shaped bars of not less than five-eighths of an inch surface with one and three-eighths inches between the bars, provided that where diamond bars are now in use, with not more than one and one-fourth inches between the bars and in proper condition, said screens shall be retained.

Screened lump coal, per ton, 95 cents.

It is hereby agreed that any mine may make mine run coal when sale of same is found and the price shall be 6 cents over present prices paid. *Provided*, the minimum price shall be 66 cents per ton and the maximum price shall be 71 cents per ton, *provided further*, that the mines which are now on a mine run basis, shall be continued on that basis during the life of this agreement, except that any mine on a mine run basis shall be permitted to return to a lump coal basis whenever said mines shall, by actual test, show over 65 per cent of lump coal. And whenever any mine on a lump coal basis shows 35 per cent or more of screenings, it shall be placed on a mine run basis, provided that the per cent is shown by one week's test. *Provided further* that any mine not having an established mine run price or any new mine commencing operation during the scale year shall have the privilege of producing mine run coal and making a test basing the price of said mine run coal on the present price of screened lump coal. *Provided further*, that the minimum price shall be 66 cents per ton and the maximum price shall be 71 cents per ton.

And further recommend that a commission be appointed, to determine what shall be the mine run price at Phillips Fuel Co., Rutledge mine, considering first the question of whether a permanent or temporary mine run price has been established.

Eight foot entry, per yard, \$2.47; twelve foot entry, per yard, \$1.70; room turning each, not to exceed nine foot neck, \$5.04.

Where neck is required to be cut more than three feet on one side \$2.25 additional shall be paid.

Double shifting in entries 25 cents per yard extra.

Breakthroughs between entries or rooms, when required to be cut, shall be paid for same as entries of similar width.

BRUSHING.

Brushing by taking up bottom or taking down top shall be 5½ cents an inch measured from the top or bottom of the vein, as the case may be, and of sufficient width for roadway. This to apply to top and bottom of ordinary slate or clay material, but if of an unusually hard material then the price to be agreed upon locally, and failing to agree the company to do the brushing. In which case the said brushing shall be kept up to within fifteen feet of the face. The minimum width of any room shall be twenty feet. Loading or unloading slate done by the miner 17 cents per car.

DAY WAGE SCALE.

Track layers, timbermen, cagers, per day, \$2.56; drivers trip riders and water haulers, per day, \$2.56; track layers and timbermen helpers, per day, \$2.36; boy couplers, per day, \$1.52; oilers, per day, \$1.40; trappers, per day, \$1.13; electric motormen and snike team drivers when engaged in regular switching, per day, \$2.70; all other inside adult labor, per day, \$2.36.

Stable men to receive 12½ per cent advance over present wages.

Boy drivers may be used between partings, but when used at regular switching they shall be considered as men and receive men's wages.

Where the company does the sharpening, the price of blacksmithing shall be 1 1-3 per cent of the gross earnings, provided that the miners' tools be given preference over all other work done by the blacksmith.

The tools shall be sharpened in a workmanlike manner.

TOP LABOR.

The price for dumpers, chunkers, screening car men, and all other common top labor shall be advanced 12½ per cent over present wages, provided that no company shall be required to figure from a higher wage than \$1.70 per day, and provided further that no one receiving more than \$1.90 shall be reduced.

Sinkers, per day of eight hours, \$2.70.

SUB-DISTRICT NUMBER THREE.

The screens shall be of flat or akron shaped bars of not less than five-eighths of an inch surface, with one and three-eighths inches between the bars, provided that where diamond bars are now in use, with not more than one and one-fourth inches between the bars, and in proper condition, said screen may be retained at the option of the operator.

Jasper county thick vein screened lump, per ton, \$1.00; Jasper county thick vein mine run, per ton, 69 cents; Polk county screened lump, per ton, \$1.00; Polk county mine run, per ton, 69 cents; eight foot entry, per yard, \$1.97; twelve foot entry, per yard, \$1.91.

Room turning, nine foot neck, eight foot wide, each \$5.04; each additional yard or fraction thereof to be paid at the rate of \$1.89 per yard.

Where the neck is required to be cut more than three feet on one side, \$2.25 additional shall be paid.

Double shifting in entries 25 cents per yard extra.

Breakthroughs between entries or rooms when required to be cut shall be paid for same as entries of similar width.

BRUSHING.

Brushing by taking up bottom or taking down top shall be 5½ cents an inch measured from the top or bottom of the vein as the case may be, and of sufficient width for roadway. This is to apply to top and bottom of ordinary slate or clay material, but if of an unusually hard material then the price to be agreed upon locally, and falling to agree the company to do the brushing, in which case the said brushing shall be kept up to within fifteen feet of the face. The minimum width of any room shall be twenty feet. Loading and unloading slate when done by the miner, 17 cents per car.

Where the company does the sharpening the price of blacksmithing shall be 1 1-3 per cent of the gross earnings, provided that the miners' tools be given preference over all other work done by the blacksmith, and the tools shall be sharpened in a workmanlike manner.

DAY WAGE SCALE.

Track layers, timbermen, cagers, per day, \$2.56; drivers, trip riders and water haulers, per day, \$2.56; track layers and timbermen helpers, per day, \$2.36; boy couplers, per day, \$1.52; oilers, per day, \$1.40; trappers, per day, \$1.13; electric motormen and spike team drivers when engaged in regular switching, per day, \$2.70; all other inside adult labor, per day, \$2.36.

Stablemen to receive 12½ per cent advance over present wages.

Boy drivers may be used between partings but when used at regular switching, they shall be considered as men and receive men's wages.

TOP LABOR.

The price of dumpers, chunkers, screening car men and all other common top labor shall be advanced 12½ per cent over present wages, provided that no company shall be required to figure from a higher wage than \$1.70 per day, and provided further, that no one receiving more than \$1.90 shall be reduced.

Sinkers, per day of eight hours, \$2.70.

SUB-DISTRICT NUMBER FOUR.

In Boone county the screens shall be of diamond bars, with three-fourths of an inch between the bars.

Screened lump, per ton, \$1.10; entry driving, per yard, 2.25; room turning, not to exceed nine foot neck each \$5.63; Frazer, screened lump coal, per ton 95 cents. Mode of separating bone coal same as last year.

Machine loading, Harrison and Jeffrey machines, one-half of pick mining price.

In Webster county the screens shall be as follows: At Lehigh the screens shall be of flat bars not less than five-eighths of an inch surface and not more than one and one-fourth inches between the bars.

Tyson screened lump, per ton, \$1.10; mine run, Tyson vein, per ton, 96 cents; or what a test will show it to be, at the option of the operator.

Pretty vein, screened lump, per ton \$1.15; Pretty vein, mine run, per ton \$1.01; entry driving, per yard \$2.47; room turning not to exceed nine foot neck, each \$5.63.

At Coalville and Kalo coal classed as soft shall be on an absolute mine run basis. Hard coal vein shall have either a diamond bar screen with three-quarters of an inch between bars or flat bars of not less than five-eighths of an inch surface with one and one-fourth inches between the bars.

Coalville hard coal, screened lump, per ton \$1.05; Coalville hard coal, mine run, per ton, 72 cents; Coalville soft coal, mine run 58½ cents; Coalville entry driving in hard coal, per yard \$1.85½; Coalville entry driving in soft coal, per yard, \$1.26; room turning hard coal, each, \$3.15; room turning soft coal, each, 2.81.

Double shifting entries, 25 cents per yard extra.

At Coalville and Kalo coal four and one-half feet thick and under, and over three feet three inches shall be 7½ cents over the scale price; three feet three inches and under to be 15 cents over the scale price. Soft coal, three feet three inches and under to be 7½ cents per ton over the scale price. Collins lump to be advanced 10 cents per ton over last year's price. Collins No. 4 over regulation screens shall be \$1.25 per ton. Cannel coal shall be 96 cents per ton until higher coal is developed at which time the local union and the operators shall make a price for the higher coal. All conditions to be same as last year.

Where the company does the sharpening the price of blacksmithing shall be 1-3 per cent of the gross earnings provided that the miners' tools be given preference over all other work done by the blacksmith. The tools shall be sharpened in a workmanlike manner.

DEAD AND DEFICIENT WORK.

Coal at Boone less than twenty-seven inches thick shall be considered deficient work. Pushing not to exceed 150 feet and no miner shall be required to push beyond second switch from face of entry; if required to push more than 150 feet 10 cents per ton extra for first thirty feet, beyond that distance the price to be agreed upon locally. All track on entry and room roads to be iron and laid at the expense of the company. Brushing not to be more than nine feet back from face of coal. Company to build roadside buildings in entries and roadways, the miner shall leave the usual space on either side of track for said buildings, but in cases where gob is entirely filled the miners shall not be required to load out any dirt unless suitably compensated for so doing.

Tyson vein, all coal under thirty-three inches shall be considered deficient and the price shall be agreed upon between the miner affected and the mine foreman, and if they fail to agree on a price per ton, it shall be worked by the day.

Pretty vein, twenty-four inches or under shall be worked single, or if double the price to be agreed upon locally.

DAY WAGE SCALE.

Head track layers, per day \$2.56; head timberman, per day \$2.56; drivers, cagers, and trip-riders, per day \$2.44; boy couplers per day \$1.52; oilers and trappers, per day \$1.13; machine runners, per day \$2.80; machine helpers, per day \$2.36; all other inside adult labor, per day \$2.36.

KALO AND COALVILLE.

Drivers, cagers, and trip-riders, per day \$2.56; timbermen, and track layers, per day \$2.56; all other inside adult labor per day \$2.36.

Boy drivers may be used between partings, but when used at regular switching they shall be considered as men and receive men's wages.

* TOP LABOR.

The price for dumpers, chunkers, screening car men and all other common top labor shall be advanced $12\frac{1}{2}$ per cent over present wages, provided that no company shall be required to figure from a higher wage than \$1.70 per day; and provided further, that no one receiving more than \$1.00 shall be reduced.

Sinkers, per day of eight hours \$2.70.

MISCELLANEOUS.

Scott County.—The price of mining at Jamestown and all parts of Scott county shall be $4\frac{1}{2}$ cents per bushel in rooms and all other conditions to remain the same except that when any work is done by the day the day wage scale of Sub-District No. 2 shall be paid. And it is agreed that the operator shall be the sole judge as to when the selling price shall be advanced. When coal is sold for more than 7 cents per bushel one-half of said increase shall be paid to the miner.

Madrid.—Mining price with the same system as now in force, \$1.15 per ton; rooms not to exceed forty feet in width and 150 feet in length, all other conditions to remain the same as last year. Brushing and day wages and scale to be paid same as Sub-District No. 4.

Angus.—The screens at Angus shall be of diamond bars with not more than one and one-fourth inches between the bars, free from obstruction and not to exceed thirty-six square feet of superficial area. Screened lump coal sold locally shall be \$1.15 per ton for mining; all coal shipped to points other than Perry shall be \$1.10 per ton; mine run at McElhaney's mine shall be $73\frac{1}{2}$ cents per ton; entry driving per yard, \$1.70; brushing per inch 5¢ cents; pushing to be same as at present; cross bars put up by miners in rooms, 28 cents each; cross bars put up in entries by miner, 43 cents each; straps shall not be considered as cross bars, but all straps shall be trimmed ready for use by the company. Coal under three feet to be worked single; if worked double 10 cents per ton extra; Breakthroughs between rooms, per yard, \$1.13. Room turning six-foot necks, \$2.81 each; nine foot neck, \$3.94; twelve-foot neck, \$5.06 each. Laying of iron track by the miner, 2 cents per foot.

Dawson.—The mining price at Dawson to be the same as adopted for Angus. Other conditions to remain the same as at present.

Van Meter.—The mine at Van Meter shall be on a strictly mine run basis at 86 cents per ton; rooms shall be limited to forty-two feet in width and 125 feet in depth; when the roof gets so low that the cars cannot be got to the face the company shall brush the same immediately; if not done within twenty-four consecutive hours the company shall provide work for the person or persons so affected until the same is done. That the system of working in rooms shall remain the same as heretofore except as changed by above provisions, and that all other prices and conditions be the same as provided in Sub-District No. 4.

New Market.—Mining price, mine run per ton, \$1.31 with same system as last year; brushing cross entries, $84\frac{1}{2}$ cents per yard. All other conditions shall remain same as last year, except that wheelers shall be advanced $12\frac{1}{2}$ per cent over present prices, and provided further that the operators affected, and the miners

local union at New Market shall have the right to adjust this question on any basis that is satisfactory to them, but should they fail to adjust it within sixty days the above price shall prevail during the scale year commencing April 1, 1903.

Clarinda.—Price of mine run coal at Clarinda to be \$1.50 per ton, and conditions to be the same as provided for New Market.

GENERAL RESOLUTIONS APPLYING TO DISTRICT THIRTEEN.

RESOLUTION NO. 1.

(a) The above is based upon an eight-hour work day, and it is definitely understood and agreed that an eight-hour day means eight hours work in the mine at the usual working places, six days a week when required by the operator, Sundays and legal holidays excepted, and except where by present local customs a half holiday is given on pay days, which may be changed locally by mutual agreement. This shall be exclusive of the time required in reaching such working places in the morning and departing from same at night.

(b) Regarding drivers they shall take their mules to and from the stables and the time required in so doing shall not include any part of the day's labor. Their work beginning at the place where they receive empty cars, but in no case shall a driver's time be docked while he is waiting for cars at the point named. Where it is the practice to haul men in the trip, the latter shall leave the bottom at such time as the company may determine to be necessary for employes to reach their working places in time to begin work at the hour fixed.

RESOLUTION NO. 2.

That the eight-hour work day shall commence at 7 A. M. from April 1st to October 1st, and at 8 A. M. from October 1st to April 1st, except when otherwise agreed locally, with one-half hour for noon where firing but once a day occurs and one hour for noon when it is necessary to fire twice a day. In neither case shall such nooning be counted a part of the eight-hour day.

RESOLUTION NO. 3.

That if any miner be docked for sending out dirty coal, he shall be notified by the pit foreman. If he be docked a second time he may be laid off for two days; if he be docked a third time within fifteen days from time of first offense, or if he at any time sends out large quantities of impurities in any one car, he shall be subject to discharge; but before discharge the pit committee and superintendent shall investigate such case and if found guilty the penalty may be enforced.

RESOLUTION NO. 4.

(a) That in accordance with the state law the company shall furnish all necessary timbers and the miner shall keep his room securely propped. If a miner working in a room fails to securely prop the same or neglect to prop as directed by the pit foreman or carelessly shoots down the props or timbers and a fall of slate occurs through such failure, neglect or carelessness he shall immediately clear his roadway of such falls of slate and do all necessary re-timbering, and in case of his neglect to do so, the company may do such work and charge the expense thereof to such miner.

(b) In case the room has been properly timbered as above set forth and the roof from any cause becomes so heavy as to require double timbering the company shall when notified by the miner do the necessary work to protect the roadway.

(c) When a fall of slate occurs between the inside props and the face of his room of an average thickness not to exceed three inches he shall immediately remove such fall, and in case of his neglect to do so the company may do such work and charge the expense thereof to such miner. If of a greater thickness he shall notify the pit foreman who shall within twenty-four consecutive hours

furnish the necessary labor to make such removal. If the fall is not removed and the place properly secured within said twenty-four hours the miners affected thereby shall be given employment until the same is removed.

(b) If the miner is dissatisfied with any decision of the pit foreman an appeal may be taken to the superintendent and the president of the local union who shall decide the question and their decision shall be final, but the miner shall continue at work pending such decision.

RESOLUTION NO. 5.

The right to hire and discharge, the management of the mine and the direction of the working force, are vested exclusively in the operator, and the U. M. W. of A. shall not abridge this right. It is not the intention of this provision to encourage the discharge of employes or the refusal of employment to applicants because of personal prejudice or activity in matters affecting the U. M. W. of A. If any employe shall be suspended or discharged by the company and it is claimed that an injustice has been done him, an investigation to be conducted by the parties and in the manner set forth in Resolution No. 8 of this agreement shall be taken up promptly and if it is proven an injustice has been done, the operator shall reinstate said employe and pay him full compensation for the time he has been suspended and out of employment; provided that if no decision shall be rendered within five days, the case shall be considered closed in so far as compensation is concerned, provided that the case must be settled within one week.

RESOLUTION NO. 6.

In the event of an instantaneous death by accident in the mine the miners and underground employes shall have the privilege of discontinuing work for the remainder of that day, but work at the option of the operator shall be resumed on the day following and continue thereafter. In case the operator elects to operate the mine on the day of the funeral of the deceased as above, or whether the death has resulted from an accident in the mine, or from any other cause, individual employes may at their option absent themselves from work for the purpose of attending such funeral, but not otherwise. In the event that the operator shall elect to operate the mine on the day of such funeral then from the proceeds of such day's operation each member of the U. M. W. of A. employed at the mine at which the deceased member was employed shall contribute 50 cents and the operator \$25.00 for the benefit of the family of the deceased or his legal representatives, to be collected through the office of the company. Except in fatal accidents as above, the mine shall in no case be thrown idle because of any death or funeral; but in case of the death of any employe of the company, or member of his family, any individual employe may at his option absent himself from work for the sake of attending such funeral, but not otherwise.

RESOLUTION NO. 7.

The operators shall pay all wages earned during the first fifteen days of each month, not later than the first Saturday after the twentieth of said month; and for wages earned after the fifteenth of said month, not later than the first Saturday after the fifth of the following month.

RESOLUTION NO. 8.

(a) The duties of the pit committee shall be confined to the adjustment of disputes between the pit boss and the miners or laborers arising out of this agreement, or any local agreement made in connection herewith, where the pit boss and said miners or mine laborers have failed to agree. In case of any local trouble arising at any time through such failure to agree between the pit boss and any miner or mine laborer, the pit committee and the pit boss are empowered to adjust, and in case of their disagreement it shall be referred to the superintendent of the company and the miner's president of local union, or local executive board of not

more than five members, the meeting of said board not to be held while the mine is in operation and should they fail to adjust it, it shall be referred to the operator of the mine and the miner's state president, and should they fail to agree they may submit the matter to arbitration which shall be final (all cases of discharge must be settled as above), or the matter shall be referred in writing to the executive committee of the Iowa Coal Operators' Association and the state executive board of U. M. W. of A. for adjustment, and in all cases the miners or mine laborers and parties involved must continue at work until a final decision is reached in the manner above set forth.

(b) If any employees doing day work shall cease work because of a grievance which has not been taken up for adjustment in the manner provided herein and such action shall seem likely to impede the operation of the mine, the pit committee shall assist the company in obtaining a man or men to take such vacant place or places at the scale rate in order that the mine may continue at work. In case the mine is shut down in violation of these agreements, or any of them, the organization will at all times furnish all the men required by the operator at the scale rate to properly care for the mine.

RESOLUTION NO. 9.

All false top or bottom, in shooting coal mines of an average thickness of over three inches, shall be paid 5½ cents an inch per running yard, provided that when the top can be left up or the bottom left down, then the company shall not be required to pay the same.

RESOLUTION NO. 10.

That all deficient work not covered by this agreement shall be paid for at a price to be mutually agreed upon between the mine boss and the party concerned, if they cannot agree in any other manner they may agree on a price per day, and failing to agree, the matter shall be referred to the superintendent of the mine and the president of the local union for adjustment and in case they fail to agree then it shall be referred for final settlement to the operator of the mine and the miner's state president, or some one designated to represent him; the miner shall continue at work pending an investigation and whatever settlement is made shall date from the time the question of deficiency was raised; if the company decides to stop the place no investigation shall be made, but the miner shall be given another place.

RESOLUTION NO. 11.

The price of coal furnished employees in the several districts shall be as follows, per ton, of 2,000 pounds at the mine: First District, lump coal, \$2.00 per ton; Second District, lump coal \$1.75, nut coal 95 cents per ton; Third District, lump coal \$2.00 per ton at shipping mines and \$2.25 at all local mines; Fourth District, lump coal \$2.25 per ton, Frazer bone coal \$1.25 per ton.

RESOLUTION NO. 12.

All labor and dead work not covered in this agreement shall receive 12½ per cent advance.

RESOLUTION NO. 13.

(a) Engineers, first class, 300 tons and over \$79.00 per month; second class, 200 to 300 tons, \$73.00 per month; third class, 200 tons or less, \$62.00 per month; tail rope engineers to receive 12½ per cent above present wages, but the minimum rate shall be \$2.25 per day or \$62.00 per month, provided further that the maximum rate shall be \$2.70 per day or \$70.00 per month. Nine hours to constitute a day's work.

(b) The tonnage shall be determined by the average of the mine for the month of November, 1902, based on screened coal or its equivalent, but in no case shall a reduction from present wages be made. This rule only applies to individuals now

receiving more than the above scale rate. This scale of wages applies only to mines in operation at least one year, and in all new mines the wages of the engineer shall be advanced with the increased tonnage until the maximum rate is reached. In no case shall the engineers, firemen or pumpers be interfered with or asked to cease work by any local committee or local union official during the life of this agreement.

RESOLUTION NO. 14.

Firemen and pumpers' wages shall be advanced $12\frac{1}{2}$ per cent over present prices, provided, that the minimum rate be not less than $22\frac{1}{2}$ cents per hour for firemen; and the minimum wage for inside pumpers shall be $28\frac{1}{2}$ cents per hour; the wages and hours of the night watchmen shall be referred to the nightwatchmen themselves and the operators of the mines for settlement. Firemen and pumpers shall be permitted to work such hours as may be mutually agreed upon between them and the operator; all other company men shall be permitted to work fifty-six hours per week when necessary to get men in and out of the mine, shall be six hours per week when necessary. But no company men, except those necessary to get men in and out of the mine, shall be compelled to work regularly more than eight hours per day, except in cases of emergency, when mechanics, blacksmiths and other necessary men to make repairs may work longer.

RESOLUTION NO. 15.

The operators agree to check off all dues, initiation fees and assessments from the miners and mine laborers when desired. The U. M. W. of A., District No. 13, agree to protect operators where such checking is done, and it is further agreed that an individual or collective order be prepared by attorneys representing both operators and miners, but no compensation shall be charged for such deductions, provided that more than \$3.00 be deducted in any one pay from any one person.

RESOLUTION NO. 16.

That this agreement is based upon cash payments after deducting organization dues, mine expenses, accepted orders, house rent and fuel. No discrimination shall be made against any employe refusing to deal in the company store or live in a company house.

RESOLUTION NO. 17.

Miners taken from the face shall be paid \$2.50 per day, and anyone refusing to do day-work may have his turn stopped, provided he is qualified by experience to do such work, and provided further that no one shall be required to do such day work for two consecutive days, and such qualified men shall be called upon in their turn.

RESOLUTION NO. 18.

When a mine works part of the morning the miners may continue at work until noon; when a mine works part of the afternoon, the miners may continue work for the balance of the day. This provision shall not be abused by the operator.

RESOLUTION NO. 19.

(a) Any local union causing any mine to shut down in violation of this agreement where the state law is not being violated, the members thereof shall be assessed twenty-five cents each, the same to be collected by the company on its pay roll and paid over to the secretary-treasurer of District No. 13. Any officer or any member of any committee of any local union, unless acting under instructions of his local union, who shall advise or encourage any employe to refuse or cease to work, where he has a right to work under this agreement, may be discharged; provided that if such officer or member of committee is acting under instructions of the local union, then the assessment as above shall be made. This not to apply to officers or committeemen who advise a man to leave the employ of the company.

(b) Whenever at any mine one or more men regularly employed at day work refuse or fail to work, on account of any grievance, and such action causes the mine to shut down, each person so offending shall be fined two dollars for each day or part of a day the mine is thus thrown idle.

(c) It is agreed whenever any mine foreman or other representative of the company persists in violating the agreement, or in using abusive language to employes, without sufficient provocation, the local union shall have the right to prefer charges against said foreman or representative of the company to the joint state board of miners and operators, and if the charges are sustained, the operator agrees to remove such foreman or other representative of the company, or the joint board may mete out such other merited punishment as the exigencies of the case may demand.

RESOLUTION NO. 20.

There shall be no double shifting of rooms without the consent of the miner or miners affected.

RESOLUTION NO. 21.

(a) In all mines where coal is blasted from the solid, competent persons shall be employed by the company to examine all shots before they are charged. Said examiners shall have the power to prohibit the charging or firing of any shot which in their judgment is unsafe. Before entering upon the discharge of their duties said examiners shall receive certificates of competency from the State Mine Inspector in the district in which the mine where they are employed is located. No boss or foreman employed by the company shall be permitted to act as shot examiner. The State Mine Inspector shall have the power to refuse to give a certificate to any person to act as shot examiner who in his judgment is not sufficiently competent, or he may revoke the certificate granted should it appear that a shot examiner is negligent or careless in the performance of his work.

(b) Whenever a majority of the miners in any mine so decide, they may employ shot firers for said mine, and whenever satisfactory arrangements can be made between the miners and shot examiners for the same persons to act as shot examiners and shot firers, the same may be done.

(c) The operator shall decide as to the necessity of firing twice a day in mines that have been in operation less than one year, and a majority of the miners employed in any mine shall decide as to the necessity of firing twice a day in all mines that have been in operation more than a year, provided that in all mines where the majority of the miners decide to fire but once a day, they shall give the operator sufficient time to develop his mine so that the same working force, and output per miner per day, shall not be reduced; and provided, further, that if after changing from twice to once a day firing, the majority of the miners in any mine shall decide to return to twice a day firing; or, if after trying once a day firing for a period of thirty days that the mine is in operation, it shall be proven that the output per miner per day is less than when shooting twice a day, on account of the miner not being able to produce the coal, the operator shall have the right to return to twice a day firing.

(d) The miner shall keep his working place and the operator the entries as free from dust as practicable, and the entries shall be sprinkled as often as necessary to keep them in a damp condition.

(e) Only sand, soil or clay shall be used for tamping, which shall be furnished at convenient places by the company, and the shot holes shall be tamped solidly from the powder to the mouth of the hole whether squibs or fuse are used to ignite the powder. Any shot having blown the tamping shall not be recharged and fired the second time.

(f) Anyone who interferes with the shot examiner or shot firer in the discharge of his duty shall be discharged.

RESOLUTION NO. 22.

The company shall keep the mine in as dry condition as practicable by keeping the water off the road and out of the working places. When a miner has to leave

his working place on account of water, through the neglect of the company, they shall employ said miner at company work, when practicable, provided that said miner is competent to do such work, or he will be given another working place until such water is taken out of his place.

RESOLUTION NO. 23.

In all mines when men are going to and from their work at the regular starting and quitting time, the company shall employ men at the top and bottom of the shaft whose duty it shall be to attend to the signal bells.

RESOLUTION NO. 24.

The price of powder to remain the same as last year, and shall be delivered at the miner's working place, and to be of standard grade and quality.

RESOLUTION NO. 25.

There shall be no demands made locally which are in conflict with this agreement, by either side.

Signed on behalf of operators:

C. H. Morris, President.
L. L. Lodwick, Secretary.

Signed on behalf of miners:

Edwin Perry, President.
John P. White, Secretary.

MUSICIANS—DAVENPORT.

REVISED SCALE OF PRICES OF THE TRI-CITY MUSICAL SOCIETY, DAVENPORT, IOWA, LOCAL NO. 67, A. F. OF M.

This price list in effect on and after January 1, 1903. All other prices annulled. All engagements must be made in writing on contract blanks to be furnished by the society, and a duplicate copy filed with the secretary.

Differences arising from a non-observance of this rule forfeits protection.

1. BALLS AND PARTIES—From 8 P. M. to 12 P. M., \$2.50 per man.
2. BASE BALL—Morning or afternoon, \$2.50 per man; morning and afternoon, \$4.00 per man.
3. CHURCH MUSIC—Mass, or services at church, with or without rehearsal, \$2.50 per man; each additional rehearsal, \$1.00 per man.
4. COMMENCEMENTS—Morning, afternoon or evening, \$2.50 per man; morning and afternoon, \$4.00 per man; morning, afternoon and evening, \$5.50 per man.
5. CONCERT AND BALL—Concert, with rehearsal same evening, \$3.00 per man; concert, with ball to 12 P. M., with rehearsal same evening, \$4.00 per man.
All engagements where an extra rehearsal is demanded by the party or parties engaging the band or orchestra an additional charge of 50 cents per man for evening and \$1.00 per man for day rehearsals shall be made by the member or members contracting for such engagements.
6. CONVENTIONS—From 7 A. M. to 12 P. M., \$5.00 per man; afternoon and evening, not later than 12 P. M., \$4.00 per man; morning and afternoon, \$4.00 per man; morning, afternoon or evening, not to exceed four hours, \$2.50 per man.
7. COUNTRY ENGAGEMENTS—Morning, afternoon and night, \$7.00 per man; afternoon and night, \$6.00 per man; all night, not to commence earlier than 7 P. M., \$5.00 per man; escorts, extra, \$1.00 per man; masquerades where brass music is required, not less than seven men shall be engaged.
8. DANCING SCHOOL—First hour, \$1.00 per man.

9. ENTERTAINMENTS—Entertainments in public halls, \$2.50 per man; entertainments, same, with ball, not later than 12 P. M., \$3.00 per man; entertainments in private halls, \$2.00 per man; entertainments, same, with ball, not later than 12 P. M., \$2.50 per man.

10. BANQUET AND BALL—Banquet, not to exceed three hours, terminating not later than 12 P. M., \$2.50 per man; banquet, with ball, same as above; installations, with dance, to 12 P. M., \$2.50 per man.

11. ESCORTS—Escorting society or lodge to or from depot or steamboat landing, not exceeding three hours, \$2.50 per man; same, not to exceed one hour, \$2.00 per man.

12. RIVER EXCURSIONS—Not exceeding twelve hours, to terminate at 10 P. M., \$4.00 per man; from 7 A. M. to 12 P. M., \$6.00 per man; morning, afternoon, or evening, not to exceed four hours, \$2.50 per man.

13. RAILROAD EXCURSIONS—One day (24 hours) or fraction thereof, \$4.00 per man; more than one day, per day, \$3.00 per man.

14. EXPOSITIONS—SAME AS FAIRS—Fairs—county, industrial, church, turners', stores, not to exceed four hours, \$2.50 per man; twelve consecutive performances, \$2.00 per man; extra, per hours, 50 cents per man.

15. FUNERALS—On foot, not to exceed two hours, \$2.00 per man; escort to Oakdale, Fairmount, Pine Hill, Chipplannock, Lutheran and Catholic cemeteries, or, if marching from one city to another of the tri-cities is required, extra, \$1.00 per man.

16. HOLIDAY ENGAGEMENTS—New Year's Eve and Day, February 22d, Labor Day, Thanksgiving Eve and Day, and, extra, on all engagements, \$1.00 per man; Fourth of July, double price on all engagements, leader and caller, each \$2.00; extra hours in connection with engagement, double price.

17. MEETINGS, POLITICAL AND GENERAL—Opening meetings, only, \$1.50 per man; opening meetings, with parade, \$2.00 per man; opening and closing meetings, with parade, \$3.00 per man; parade only, not exceeding two hours, \$2.00 per man.

18.—OPERA HOUSES AND THEATERS—English and German—Grand opera, one performance, including on. rehearsal, \$4.00 per man; each additional performance, \$3.00 per man; extra rehearsal, \$1.00 per man; operettas or opera bouffe, same as theaters, same number of performances, including rehearsals, \$15.00 per man. rehearsal, day time, \$1.00 per man; matinees, \$2.00 per man. Operetta, week engagement—Seven evenings and two matinees, including rehearsals, \$18.00 per man. theaters, same number of performances, including rehearsals, \$15.00 per man. Vaudeville theatres—Leader (violin), per week, \$25.00; inside man, per week, 18.00; pianist (playing alone) per week, not less than \$20.00; brass band in front of theatre, not less than nine men, per man, each night, \$1.00; leader of said band, each night, \$2.00 (such band not to play exceeding one (1) hour, terminating not later than 7:45 P. M.).

19. OPENINGS—Stores, saloons, bazaars, and others, not to exceed four hours, \$2.50 per man.

20. ORATORIOS—One performance including one rehearsal, \$4.00 per man; each additional rehearsal, day or evening, \$1.00 per man; each additional performance, \$3.00 per man.

21. PARADES—Not to exceed two hours (time to count from time band is ordered), \$2.00 per man; parade—Labor Day—not to exceed four hours, \$3.00 per man; parade—street car or wagon—not to exceed three hours (time to count from the time band is ordered), \$2.00 per man.

22. PICNICS—Morning, afternoon and evening, not later than 12 P. M., with concerts, \$5.00 per man; morning and afternoon, not later than 6 P. M., \$4.00 per man; afternoon and evening, not later than 12 P. M., \$4.00 per man; afternoon from 4 P. M. to 12 P. M., \$3.50 per man; parade in connection with engagement, extra, per man, \$1.00; bird shootings, in the tri-cities same as picnics.

23. LAND SALES—Morning or afternoon, not to exceed three hours, \$2.00 per man.

24. RACE MEETINGS—Morning or afternoon, not to exceed four hours, \$2.00.

25. RECEPTIONS—Afternoon, not later than 6 P. M., \$2.50 per man; evening, not later than 11 P. M., \$2.50 per man; afternoon and evening, not later than 11 P. M., \$4.00 per man.

26.—SERENADES—Not to exceed three hours, \$2.50 per man.

27. SKATING RINKS—Not to exceed three hours, \$2.50 per man; twelve consecutive engagements, \$2.00 per man.

28. TROLLEY PARTIES—Not to exceed four hours, with or without dancing, \$2.50 per man.

29. WEDDINGS—Not to exceed four hours, \$2.50 per man.

30. WATCH TOWER AND PROSPECT PARK—Watch Tower or Prospect Park engagements for Tri-City Railway Company, on week days, from 7 P. M. to 10 P. M., \$2.50 per man; on Sundays, from 2 P. M. to 10 P. M., \$4.00 per man.

31. SPECIALTIES.—(a) Watch Tower, Schuetzen Park, Grand Island, Campbell's Island and Prospect Park shall be construed under the same heading as Davenport, Rock Island and Moline.

(b) In case of failure or casualties which might occur while ordered for an engagement, the price for such engagement shall be fixed by the men engaged where such failures or casualties might occur, subject to the approval of the executive board.

(c) The renewal or change of admission shall be proof for change or renewal of performance or engagements.

(d) Managers must charge extra for each engagement, \$1.00; callers to receive extra for each engagement, \$1.00.

(e) If an engagement is postponed, the member first engaged must have the preference when the engagement is filled.

(f) Should cases of emergency arise in any business, the specific nature of which is not provided for in this scale of prices, they shall be reported to the executive board, who shall have power to regulate the same.

(g) In all cases traveling expenses, board and lodging to be furnished over and above the schedule prices adopted by the society on all engagements.

(h) At all engagements later than 1 A. M. supper and refreshments *must* be furnished. If none are provided, managers *must* charge extra, per man, 50 cents.

(i) Special attention is called to Articles B, D, E, F and G, in section of specialties.

(j) Any engagement where brass music is required in whole or in part, not less than nine men shall be engaged; parades, ten men, country engagements excepted.

(k) Each additional hour, or fraction thereof, on all engagements, extra, per man, 50 cents.

(l) Engagements where the presence of an orchestra or band is not demanded before 11 o'clock P. M., a reduction of 50 cents per man (from schedule price) will be made.

(m) All theatrical companies playing at 10 cents, 10 and 20 cents, or 10, 20 and 30 cents, or any prices below 30 cents, managers are allowed to take engagements for any number of men. All companies playing at prices from 25 cents upward, five (5) men or more must be employed.

(n) Engagements in Bettendorf, Watertown or Milan, extra, per man, above city price, 50 cents.

(o) No manager shall be allowed to take any dance engagements, masquerades or balls, unless all men engaged are retained for the entire engagement.

(p) Engagements where "blacking" or "making-up" is required, an extra charge of 50 cents per man must be made.

(q) Playing for dinner or supper at hotels, cafes or restaurants, \$1 per man, not to exceed one (1) hour, and including meals.

(r) Where tympanies are required for engagements, parties engaging music must pay charges for transporting said tympanies.

(s) House leader of opera house or theatre to receive, extra, above schedule price of engagement, \$1.00.

(t) Where the services of a director are required exclusively as such, said director to receive, extra, above schedule price of engagement, \$1.00.

(u) All engagements must be made in writing, on contract blanks to be furnished by the society, and a duplicate copy of all contracts to be filed with the secretary. (Differences arising from a non-observance of this rule forfeits protection.)

PAINTERS—CLINTON.

ARTICLES OF AGREEMENT.

This agreement made and entered into this.....day of.....1903, by and between.....contracting painter of the city of Clinton, Iowa, party of the first part, and Union No. 183, a local branch of Painters, Decorators and Paperhangers of America (Incorporated), by its president and recording secretary of the same place, party of the second part,

Witnesseth, that for and in consideration of the covenants and agreements hereinafter to be made by said second party, the said first party covenants and agrees to and with the said second party that he will employ union journeymen painters and paperhangers, members of the union of the party of the second part, as far as possible, that nine (9) hours shall be a day's work for all persons employed by him or them on time work, time and one-half shall be allowed for overtime and double time for Sundays and legal holidays; that he shall pay not less than twenty-five (25) cents per hour to journeymen painters and thirty (30) cents per hour to journeyman paperhangers. For paperhanging by the piece such prices as may be hereinafter adopted, but it shall not be more than 2½ cents per roll below the scale already adopted by said second party for such work. All tools and material shall be furnished by said first party.

And be it further agreed, that for and in consideration of the covenants and agreements heretofore made by said first party, the said second party agrees to use so far as lies in its power, all possible diligence to obtain for said first party competent union journeymen workmen; that said first party shall have the right to employ at least one apprentice and additional one for every five journeymen in his employ, subject to the rules governing apprentices laid down in the constitution of said second party. All complaints from said first party or his employees shall be immediately investigated by a committee of said second party appointed for that purpose, and shall, if possible, be quickly and permanently settled.

It is mutually agreed that said second party shall be the sole judge of the moral character of its applicants for membership; that all disagreements or disputes which cannot be settled otherwise, shall be submitted to an arbitration committee of five, four of which shall be workmen of our craft, two to be selected by the first party and two by the second party, these four to select a fifth member. They shall meet within forty-eight hours. From the decision of this committee there shall be no appeal, and the cost of investigation shall be paid by the party against whom the decision is rendered. This agreement goes into effect from this date and shall continue in full force up to March 1, 1904.

Witness our hand and seals this.....day of February, 1903.

NET PRICE LIST.

All goods based on eighteen inches or less in width, and eight yards in length, both edges trimmed. All additional lengths and widths to be charged for proportionately, unless otherwise specified.

1. Blanks, one edge, 12½ cents per roll.
2. Blanks, one edge on board, 15 cents per roll.
3. Bronzes, glimmers and flats, 20 cents per roll.

4. Sanitary and varnished tiles, 25 cents per roll.
5. All goods twenty-two inches wide, extra, per roll, 5 cents.
6. Felts, granites, pulp tints ingrain and plain cartridge, 25 cents.
7. Pressed goods, leatherettes, 40 cents.

Crown friezes or friezes and borders where the pattern must match the corresponding patterns in the paper, whether at top or bottom, and the paper used with such frieze or border, 50 per cent above regular rates.

Borders shall be same price per roll of eight yards in length as the paper to which it belongs.

BURLAP AND MUSLINS—Unfinished burlap, buckram, canvass and muslin, per yard, 10 cents; stained, painted or finished burlap or buckram, per yard, 15 cents, muslin tacked or pasted for paper, sewing and tacks to be furnished by employer per yard, 7 cents.

MISCELLANEOUS AND EXTRAS.—Combinations hung alternate, extra, per roll, 5 cents; all papers cut close, where there are no frieze or border used, extra, per roll, 5 cents; all friezes of wall paper hung perpendicular, extra per roll, 10 cents; all dados of wall paper or other material not otherwise specified, 50 per cent extra; all papers on muslin, same price as two edge work; all papers on hallways with stairs, extra, per roll, 5 cents; closets and shelving, extra per roll, 10 cents; all papers hung on bath rooms, toilet rooms, pantries and vestibules, extra 50 per cent; covers of felt, twenty-one inches wide or less in width, per yard, 14 cents; covers of felt over twenty-one inches wide, per yard, twenty cents; labor for stripping off old paper, washing walls, sand papering painting walls and repairing of wall paper or other material, per hour, 35 cents; sizing ceilings, each, 50 cents; sizing rooms, each, \$1.00; sizing stores and large rooms 2½ cents per yard including material.

REGULATIONS.

Nine hours shall constitute a day's work for paperhangers, from 7 A. M. to 5 P. M., with one hour at noon.

All work done after 5 P. M. and before 7 A. M., and on Sundays and legal holidays shall be charged double time. (Except Labor Day, when no work shall be done.)

The time of payment of wages shall be once every week.

All stock and material used, ladders, scaffolding, etc., shall be delivered to and from all jobs by employers.

Paperhangers will not be held responsible for work if walls are prepared by others than paperhangers.

Time shall be paid for when paperhanger is sent out on a job that is not ready.

Adopted and in force from January 15, 1903.

Brotherhood Painters, Decorators and Paperhangers' Union, No. 183.
Clinton, Iowa.

PAINTERS—COUNCIL BLUFFS.

AN AGREEMENT.

We, the Brotherhood of Painters and Decorators of America, headquarters at Lafayette, Ind., do hereby agree on the presentation of the following articles to the Master Painters of Council Bluffs, Iowa.

1. Eight hours shall constitute a day's work, same to be counted from 8 A. M. to 5 P. M., with one hour intermission, viz: from 12 o'clock M. to 1 o'clock P. M.

2. The minimum scale of wages to be paid a journeyman painter or paperhanger, during the existence of this agreement, shall be thirty (30) cents per hour.

3. The party of the first part—master painter—agrees to employ none but union men in good standing in the Brotherhood of Painters and Decorators of America, with headquarters at Lafayette, Ind., and will recognize no credentials, or

working card, except that issued by the local branch of the above named national organization.

4. Pay for time and one-half shall be allowed on all overtime. Overtime to mean all work performed after 5 o'clock P. M.; also work on Sunday, Decoration Day, Fourth of July, Christmas, New Year's and on first Monday in September, known as Labor Day, no work under any pretense shall be allowed.

5. The party of the first part shall not lump, piece-out or sub-let any work pertaining to the painting and paper hanging business, to any workman in their employ, nor shall any journeyman, while in the employ or not of any signer to this agreement, be allowed to take any contract or piece work in any shape or manner, from any person whomsoever, whether he be a party to this agreement or not.

6. Journeymen painters and paper hangers when employed outside of the city or too far to reach home every night, to receive railroad fare, also when working in Omaha or vicinity, or South Omaha or vicinity, to receive union wages as demanded by unions of said cities.

7. The party of the first part—master painter—agrees not to discriminate against any of his employes on account of their activity in the affairs of the party of the second part—journeymen painters—provided said activity is exercised after working hours.

8. A sympathetic strike, when ordered by the Building Trades Council, shall not be considered a violation of this agreement, provided it does not interfere with any work or jobs where no other mechanic is employed.

9. A standing arbitration committee of three men from each party to this agreement shall be chosen, before whom matters not provided for in this agreement, or any violation thereof, shall be brought. If at any time this committee shall fail to agree on any matter coming before it for settlement, said committee shall have power to call in a disinterested party of three, whose decision shall be final and binding.

10. It shall be the duty of the standing arbitration committee to call a joint session of both parties to this agreement at least thirty days prior to the expiration of same, for the purpose of formulating articles and adopting a scale of wages for the ensuing year.

11. In event at any time party of the second part—journeymen painters—is unable to furnish sufficient competent men belonging to their order, when called upon to do so, the said party of the first part—master painters—shall have permission to employ non-union workingmen, providing said non-union workingmen make immediate application for membership to organization of party of the second part—journeyman painters—accompanied by the required fee or an order on party of the first part for same. Should said non-union men fail of election to membership in organization of party of the second part, the party of the first part shall, upon notification of same, discharge said non-union man from his or her employ.

PAINTERS—DAVENPORT.

SCALE, HOURS AND TRADE REGULATIONS.

To Master Painters: The following wage scale and trade rules of Local Union No. 199 of Painters, Decorators and Paper Hangers, located at Davenport, Iowa, are to go into effect April 1st, 1903, continuing until April 1, 1904:

Eight hours to constitute a days work. This to be performed during the hours of 8 A. M. and 5 P. M. Lowest wages to be 31¼ cents per hour. Sundays, legal Holidays and overtime to be paid for at the rate of time and one-half. Members will work one week with non-union men; during which time they must make application for membership. No shop to have more than one apprentice.

PAINTERS AND PAPER HANGERS—OTTUMWA.

ARTICLES OF AGREEMENT.

OTTUMWA, IOWA, March 1, 1902.

Agreement between the members of Local Union No. 136, Brotherhood of Painters, Decorators and Paper Hangers of America, and the painting and papering contractors of Ottumwa, Iowa.

That the said contractors do hereby agree to pay not less than the minimum scale established by said union, and do agree to employ only union men in such business, or those willing to become members, this agreement to remain in force until March 1, 1903.

PAINTERS' MINIMUM SCALE—27 7-9 cents per hour, nine hours per day. Time and one-half for overtime, nights, Sundays and holidays except Labor Day when no work will be done. Shop to furnish all tools and brushes.

FOR PAPER HANGERS—By the bolt, 15 cents for lap work; 20 cents for wire edge; 30 cents for butted work; border per yard 1½ cents; for lap work, paper to be shop trimmed; paste and drayage to be furnished by the shop; sizing ceiling 20 cents; side walls 40 cents; scraping or sanding seams, or hanging by the day 30 cents per hour.

Signed by the union by:

W. A. Whitney, President.
Frank Eastman, Secretary.

Endorsed by the Ottumwa Trades and Labor Assembly:

C. A. Hagberg, President.
J. S. Byrne, Secretary.

Endorsed by the Ottumwa Building Trades Council:

James King, President.
W. A. Whitney, Secretary.

PIPE LAYERS—DES MOINES.

AGREEMENT AND SCALE BETWEEN PIPE LAYERS AND MASTER PLUMBERS ASSOCIATION.

Articles of agreement entered into this day of April 18, 1903, between the Des Moines Master Plumbers' Association and Local Pipe Layers' Union No. 7744.

1. All wages shall be \$2.25 to \$2.50 per day, from April 1, 1903 to April 1, 1904, eight hours constituting a days labor from 8 A. M. to 12 M. and from 1 P. M. to 5 P. M.

2. All overtime to be paid at the rate of time and a half; Sundays and legal holidays at the rate of double time.

3. Local Union No. 9744 agrees that Master Plumbers have the right to hire non-union men to work for twelve working days, provided Local Union No. 9744 cannot furnish them union men.

4. Master Plumbers agrees to hire none but union men when Local Union No. 9744 can furnish same.

5. Local Pipe Layers' Union No. 9744 agrees in case of a dispute arising to have the same submitted to the arbitration committee to adjust same.

6. Arbitration committee to consist of one member from Pipe Layers Union and one from Master Plumbers Association, the two to select the third member.

7. No strike can be called without giving thirty days' notice in writing.

These articles go in effect when signed by Union No. 9744 and the Master Plumbers Association.

Same signed by Pipe Layers Union:

P. J. Kain, President.
N. J. Anderson, Secretary.
Wm. Coormican.

Master Plumbers Association:

A. M. Fleisher, President.
Geo. L. Walker, Secretary.

PLASTERERS—ALBIA.

WAGE SCALE.

Two coats troweled work, 24 cents per yard; two coats and white coat work, 28 cents per yard; three coats dry work, hard finish, 30 cents per yard; two coats, troweled work furnished, 10 cents per yard; two coats, white coat furnished, 12½ cents per yard; three coats dry work, hard finish, 15 cents per yard; tenders, per day, nine hours, \$1.75; lathing, 2½ cents per yard; journeymen work, per day, nine hours, \$3.50; fifty cents an hour for overtime; brick work, 20 cents per yard.

We further agree that we will not in any manner with any person or persons, directly or indirectly, violate any of the terms of this agreement or the above schedule of prices.

We further agree that when one or more of us are in the need of help that we will hire or offer to hire each other.

We further agree that in case any of the signers of this agreement violate any of the terms herein whatever, he or they hereby agree to forfeit to the others the sum of fifty dollars (\$50.00) as a penalty losing all of his rights in the terms and conditions of this agreement.

Dated and signed at Albia, Iowa, this twenty-fourth day of February, 1903.

John Sipes,
Wm. Benning,
A. K. Robinson.
S. E. Tucker.
Jesse Bector.
W. L. Sylvester,
E. L. Coffman.

PRINTERS—BOONE.

CONTRACT BETWEEN THE BOONE DAILY NEWSPAPER PROPRIETORS
AND OTHER EMPLOYING PRINTERS OF THE CITY OF BOONE AND
THE MEMBERS OF THE TYPOGRAPHICAL UNION NO. 381.

BOONE, IOWA, Nov. 26, 1902.

This contract made and entered into this twenty-sixth day of November, 1902, by and between the employing printers of the city of Boone, Iowa, as party of the first part, and the members of the local union of the International Typographical Union of America, No. 381, located at Boone, Iowa, as second party; Witnesseth:

That the said party of the first part does hereby agree to adopt the use of the typographical union label, and in order to be entitled to the use of said label, hereby agree to comply with the constitution, by-laws and the adopted scale of wages, and such other requirements as are hereinafter specified.

1. Nine (9) hours shall constitute a day's work, and shall be between the hours of seven o'clock A. M. and six o'clock P. M.

2. All persons employed in any office using the label shall become members of the union as soon as eligible.

3. Not more than one apprentice shall be employed to every four journeymen printers.

4. The scale of wages shall be: for foreman, \$12.00 per week, journeymen, \$10.50 per week.

When composition is done by the piece the following scale shall apply: Morning papers, 30 cents per 1,000 ems; evening papers and papers published weekly, 20 cents per 1,000 ems.

In case Simplex or Thorne machine is used an apprentice may be employed as spacer or operator.

Machine operators shall not receive less than the scale for a nine hour day; or 10 cents per 1,000, working not less than an eight-hour day. In case copy is not furnished for the full eight hours, operators shall receive time scale for lost time, thirty minutes or less not to be counted, thirty-one minutes or more to be counted one hour.

Time and one-half shall be paid for all overtime and Sundays, and double time for all legal holidays, the following holidays to be considered as such: Christmas, New Year's, Fourth of July, and Labor Day, with a half holiday on Decoration and Thanksgiving days.

5. Where machines are used, persons operating such machine shall be a member of Boone Typographical Union No. 381.

This contract to remain in force for a period of one year from date, or until a new one is prepared and agreed to by both parties.

Signed:

Publishers and Employers.
Officers of No. 381.

PRINTERS—CEDAR RAPIDS.

OFFICE REGULATIONS.

1. Newspaper offices shall be allowed one apprentice for seven compositors or under. One apprentice shall be allowed for each additional seven compositors or fraction thereof. *Provided*, that no newspaper be allowed more than three apprentices.

2. Each job office employing three journeymen printers, or less than three, shall be entitled to one apprentice, and one additional apprentice for each eight journeymen.

3. Job offices and newspaper offices, when owned by the same company, but under different foremen, shall be considered as different offices, and each department entitled to an apprentice; *Provided*, that if more than one newspaper is printed in any such newspaper office, apprentices more than one shall only be permitted when the number of journeymen employed, as authorized by section 2, justifies same.

4. Other weekly newspaper offices and the day department on morning newspapers shall also be governed by section 2.

5. The regulations in regard to apprentices shall apply only to novices employed at setting, distributing or imposing type or proving galleys.

6. Compositors shall correct one proof and all errors in a revise which they may have neglected in the first proof but shall not be responsible for any change from copy or change from the usual style, nor any errors in a revise which were not marked in the first proof, nor for errors not marked.

7. In the correction of market reports, the compositor shall be entitled to such part of the report as comes under the classification head or subhead in which such correction is made.

8. All matter set up solid on account of lack of leads and afterward leaded shall be done at the expense of the office, and shall be charged in full as leaded matter.

9. All matter recognized as dead shall be the property of the compositor, and shall be lifted at his discretion, should the copy of said matter, or any portion thereof, be given out for composition; *provided*, that if any question shall arise as to what is dead matter, the chapel shall decide the question.

10. In offices where both hand composition and machine composition is done there shall be no culling of "fat" for the machines, such as leaded matter, poetry, matter with a great deal of quads in it, or "fat" tables. All matter must be given out in a fair manner, without reference to advertisements, which cannot be set by machines.

11. In offices where both week and piece workmen are employed, the fat and lean copy must be distributed equally among all; Provided, where a certain work is started on time it shall be finished on time; when it shall be started by the piece it shall be finished by the piece.

12. All matter set up for newspapers during the week, whether published or not, shall be placed in the compositor's bill at the end of the week.

13. Compositors on newspaper work shall not be required to prove or make up their own matter.

14. All newspaper advertisements must be charged according to the standard type of the advertising columns, whether agate, nonpareil, or other type, although sometimes set in larger letter; but advertisements set in the regular style of reading matter shall be charged for only in the type in which they are set; Provided, that the proprietor of any office may select an employee, who is a member of the union, to set the advertisements by the week or on time.

15. Where advertisements are set by the piece, cuts or stereotype plates, above and below which there may be type to be set by the compositor, or which require justification to a line or lines of type on either side, to fit the column, or to occupy a certain space in the column with matter, such cuts or plates shall be charged for as other advertisements.

16. All display heads shall be measured according to the smallest type used in said head; Provided, that the type is smaller than the body of the article.

17. All cuts in reading matter shall be measured according to the size of the type in which the article is set.

18. Where tables are set up in blank, or partly filled out—as election tables, etc.—and paid for as provided by this scale, they may be afteryards "filled out" on time by a compositor at the regular rate per hour for time work; but when said matter is declared dead it shall not be the property of the compositor, but shall be distributed at the expense of or by the office.

19. When intricate work, etc., occurs, which this scale does not reach, the price shall be agreed upon by the foreman and chapel.

20. Compositors put to work after time has been called shall be entitled to full cases.

21. This scale of prices shall not prevent superior workmen from getting a higher rate of pay, but it shall be held that no workman shall work for less than the prices herein specified.

* * * * *

23. Employer printers who do their own work in offices known as a "one-man office" shall restrict themselves to nine hours' work, as active printers at the case.

SCALE OF PRICES.

24. Compositors on newspapers printed in the English language shall be charged for at the rate of 35 cents per 1,000 ems, for all type from agate to pica inclusive, on morning newspapers, and 33 cents on evening and weekly newspapers.

25. Book composition shall be charged for at the rate of 30 cents per 1,000 ems.

26. Distribution per 1,000 ems, one-third price of composition.

27. Journeymen employed by the week shall receive not less than \$13.50 per week of 54 hours.

28. The minimum work for time work on newspapers shall be 1,000 ems per hour, and on book and job work at a pro rata work per hour.

29. On all piece work, where different sizes of type are used, 100 ems or more shall be considered a cut-off, and be measured according to the size of the type in which it is set.

30. No foreman shall receive less than \$19.00 per week on morning newspapers, and \$16.50 on evening and weekly newspapers and in job offices.

31. Reading matter notices set to one-half measure and divided longitudinally with a rule shall be charged one and one-half price.

32. Hotel arrivals, dialect matter, "run-in" programs, names and tables cut in takes exceeding 300 ems, shall be charged price and one-half.

33. Side and insert cuts in less than sixteen ems pica measure shall be charged price and one-half.

34. Compositors on evening papers shall be entitled to seven consecutive hours of composition (exclusive of lunch time) between the hours of 7 A. M. and 5 P. M. Composition between the hours of 5 P. M. and 7 A. M. shall be counted overtime, and charged for at the rate of price and one-half.

35. Compositors on morning newspapers shall be entitled to seven consecutive hours of composition (exclusive of lunch time) between the hours of 6 P. M. and 4 A. M. Composition between the hours of 4 A. M. and 1 P. M. shall be counted as overtime, and charged for at the rate of price and one-half.

36. Work in all book and job offices overtime and on Sundays and legal holidays shall be charged at the rate of 32½ cents per hour for time work, and 35 cents per 1,000 ems for piece work. In the construction of this section the following are considered legal holidays: May 30th, July 4th, Labor Day, Thanksgiving day, December 25th.

37. Piece hands required to make up shall be paid regular time rates.

38. Matter containing three columns of figures, or words and figures, without rules, to be charged one and one-half price.

39. All matter containing three or more columns, with rules, to be charged two prices.

40. Matter containing four or more columns, with or without rules, to be charged two prices.

41. Introductions, title headings, and foot notes to tables in newspapers shall be considered a part of the table when not making 100 ems.

42. When tabular matter is given out in page takes, all short pages or "bobs" shall be considered as full pages.

OFFICE REGULATIONS FOR MACHINES.

1. Offices using linotype machines shall have the privilege of choosing between time and piece basis of wage scale for operators. Provided, that said work shall be done either all on time or all by the piece; any change from time to piece, or vice versa, to continue during a period of time not less than thirty days.

2. Time lost by operators due to non-supply of copy, breaking of machine, etc., shall be paid for at the regular time rate if such lost time exceeds thirty minutes in any one day.

3. All "duplicates" of matter set by the piece shall be cut by the office and pasted by employees. Lost "duplicates" to be found by the office. If operator cannot identify missing "duplicates" he shall not be allowed for them.

4. The operator shall be supplied with a full complement of matrices and space bands.

5. "Ring" corrections and "hand-out" lines shall be charged for at the rate of two lines for each line corrected or set.

6. Linotype operators shall be paid only for lines of corrected matter actually cast according to the number of ems therein, no "pick-ups" or cuts being allowed. Provided, that headlines, rules, dashes, etc., inserted by the operator shall be measured.

7. Operators shall not be required to saw or cut lines, or place corrected lines in galley. Leader lines shall be paid for at the rate of price and one-half; two (2) justifications shall be price and one-half; three (3) justifications shall be double price, more than three (3) justifications shall be double price; border matter shall be double price. All lines set less than the full width of a regular column—4 e., half measure, third measure, shall be measured as full lines at price and one-half. Tabular matter less than a column in width which is to be made up into full measure shall be measured single price, full width of column. Irrespective of the number of justifications or columns in same. All heads set on machine, from a two-letter matrix in newspaper offices shall be charged for at the rate of line and one-half for each line so set. Parallel matter such as two names in one line shall be charged for at the rate of two prices.

8. Work on linotype machines on job and newspaper work between the hours of 7 A. M. and 5 P. M. and 6:30 P. M. and 3 A. M. shall be charged at regular rate per 1,000 ems. All overtime, Sundays and legal holidays shall be charged for at the rate of price and one-half. In the construction of this section the following shall be considered legal holidays: May 30, July 4, Labor day, Thanksgiving day, December 25.

9. Intricate work not covered by this scale shall be paid for as agreed between the foreman and the chairman of the office.

10. When matter is set in a foreign language, except quotations, not exceeding three (3) lines in length, the operator shall be allowed two (2) lines additional for each line.

11. When papers use individual matrices for black letter, small-cap lines, side-heads, italic words or lines, or accented letters, the operator shall be allowed two lines additional for each line in which same appears; provided, such matrices are not in the keyboard or at the side of machine.

12. All matter set by machines at the piece rate, which is indented for insertion of type of a different font, shall be paid for at the rate of price and one-half.

13. Machine operators shall be entitled to eight hours' work per day.

SCALE OF PRICES.

14. Operators on morning newspapers shall receive not less than 7 cents per 1,000 ems, for nonpareil and minion, and one-half per cent more for each additional point.

15. Operators on morning newspapers shall receive not less than \$18.00 per week of 48 hours.

16. Operators on evening newspapers and in job rooms not less than 6½ cents per 1,000 for nonpareil and minion, and one cent more for each additional point.

17. Operators on evening newspapers and in job rooms shall receive not less than \$16.00 per week of 48 hours.

PRINTERS AND PRESSMEN—DES MOINES.

SCALE OF PRICES OF DES MOINES TYPOGRAPHICAL UNION NO. 118.

COMPOSITORS.

1. Compositors employed by the week in book and job offices shall receive not less than \$15.00 per week of fifty-four hours, from December 17, 1900, to June 17, 1901; \$15.50 per week from June 17, 1901, to December 17, 1901; \$16.00 per week from December 17, 1901, to December 17, 1904.

2. Book composition, 35 cents per 1,000 ems.

3. Distribution, per 1,000 ems, one-third price of composition.

4. On all piece work, where different sizes of type are used, 100 ems or more shall be considered a cut-off, and be measured according to the size of type in which it is set.

5. Reading matter notices set to one-half measure and divided longitudinally with a rule shall be charged one and one-half price.

6. Hotel arrivals, dialect matter, "run-in" programs, names and tables, cut in takes exceeding 300 ems, shall be charged price and one-half.

7. Side and insert cuts in less than sixteen ems pica measure, shall be charged price and one-half.

8. Where the compositor is required to make up, he shall receive 3 cents per 1,000 ems extra, and be entitled to all folios, sunk heads, blank and short pages.

9. Matter containing three columns of figures, or words and figures, without rules, to be charged one and one-half price.

10. All matter containing three or more columns, with rules, to be charged two prices.

11. Matter containing four or five columns, with or without rules, to be charged two prices.

12. Introductions, title headings and foot notes to tables, shall be considered part of the table when not making 100 ems.

13. When tabular matter is given out in page takes, all short pages or "bobs" shall be considered as full pages.

14. No foreman shall receive less than \$18.00 per week in book and job offices.

15. In all book and job offices all work required to be done between the hours of 6 P. M. and 7 A. M., and overtime shall be paid for at the rate of 37½ cents per hour for time work, and 40 cents per 1,000 ems for piece work, and time and one-half for Sundays and legal holidays; provided, offices working a night shift shall be required to pay 10 per cent increase over the day scale. In the construction of this section the following are considered legal holidays: January 1st, May 30th, July 4th, Labor Day, Thanksgiving Day, December 25th.

16. Compositors physically disqualified from earning the full scale may, upon application to the union, be granted a superannuate permit, the scale for such members to be not less than \$12.00 per week; *provided*, that for each five or majority fraction thereof of journeymen printers only one member holding such permit shall be employed in any one office.

17. Compositors employed on weekly newspapers shall receive not less than \$15.00 per week of fifty-four hours, from December 17, 1900, to June 17, 1901; \$15.50 per week from June 17, 1901, to December 17, 1901; \$16.00 per week from December 17, 1901, to December 17, 1904; piece composition at 30 cents per 1,000 ems; overtime to be paid for at the rate set forth in section 15, for time work, and 37 cents per 1,000 ems for piece work.

PRESSMEN.

All pressmen working under the jurisdiction of the Allied Printing Trades Council of the city of Des Moines shall receive the following wage scale:

Platens.—For tending two presses, \$10.00; for three presses, \$12.00; for four presses, \$13.00.

Cylinders.—For tending one press, \$12.00; for two presses, \$15.00; for one cylinder and two platen presses, \$15.00; where, in addition to running the presses a pressman also acts as foreman, he shall receive \$16.00; foreman having charge of four or more cylinders shall receive \$20.00 per week.

The scale of assistant pressman shall be \$12.00 per week; one assistant allowed for two journeymen.

This shall not be construed as meaning one assistant shall be employed to two journeymen.

Extra time shall be paid for at the rate of price and one-fourth. Sundays and legal holidays, price and one-half. Above scale for two years from December 17, 1900, and a 5 per cent increase for two years thereafter, except foremen, which shall remain at \$20.00.

Nine hours to constitute a day's work for platen and cylinder pressmen.

Offices working a night shift shall be required to pay 10 per cent increase over the day scale.

PRESS FEEDERS.

The weekly scale for press feeders shall be as follows:

DAY CREWS.

Newspaper feeders, \$10.50; job cylinder feeders, \$9.00, one year; \$9.50, one year; pony feeders, \$7.50, one year; \$8.00, one year; platen feeders, \$6.00.

Offices working a night shift shall be required to pay 10 per cent increase over the day scale.

One apprentice to each office employing a journeyman.

Two apprentices to four journeymen; three apprentices to seven journeymen; four apprentices to ten journeymen.

Apprentices shall receive \$2.00 per week for the first six months of apprenticeship, and shall receive an increase of \$1.00 per week every six months during such term of apprenticeship.

Nine hours to constitute a day's work. Extra time to be paid for at the rate of price and one-fourth. Sundays and legal holidays, price and one-half.

Above scale to be effective for two years from December 17, 1900, and 5 per cent increase for two years thereafter on entire scale except platen feeders.

NEWSPAPER SCALE.

Following is the newspaper scale for Des Moines Typographical Union No. 118:

1. In machine composition all work must be time work. Piece work cannot be allowed in any case.

2. Compositors employed on machines on morning papers shall receive not less than \$3.35 per night for eight consecutive hours on regular situations of six days a week; provided, that one fixed day each week may consist of nine hours, the additional hour to be paid for at the regular rate and not to be considered overtime.

3. Compositors employed on machines on evening papers shall receive not less than \$2.85 per day. Eight consecutive hours shall constitute a day's work on regular situations of six days a week. The hours shall be between 7 A. M. and 6 P. M.; provided, that one fixed day each week may consist of nine hours, the additional hour to be paid for at the regular rate and not to be considered overtime.

4. The rate of wages and hours of work for makeups, advertising men and floormen on morning and evenings newspapers, beginning November 10, 1904, shall be the same as those of linotype operators. In the meantime, the newspaper publishers of Des Moines agree to pay for the foregoing situations upon the following basis:

From Monday, November 10, 1902, and until November 10, 1903, an increase of 5 per cent over \$18.00 and \$15.00 per week, now paid in morning and evening newspaper offices, respectively; and from November 10, 1903, until November 10, 1904, an additional increase of 5 per cent; except that, overtime, which shall apply to all work done over eight hours per day or night by makeups, advertising men and floormen, shall be paid for at the rate of one and one-eighth price; provided, that on one specified day per week in each office straight time shall be charged for all time so employed. All night work done on afternoon papers shall be charged for at the night scale.

All work done on machines over eight hours shall be considered overtime; provided, that nothing in this section shall be construed to conflict with sections 2 and 3 of this scale, which recite that on one specified day each week an additional hour may be worked at the regular hourly rate, and that all other days time over eight hours, and on the specified day, time over nine hours, shall be paid for at price and a half.

6. Foremen employed on evening newspapers shall receive not less than \$16 per week, and on morning newspapers not less than \$20 per week.

7. In no case shall a compositor receive less than one-half day's pay for work done in advertising departments of daily and weekly newspapers.

8. Beginners on machines shall receive the following scale for the first nine weeks, after which they shall receive the scale of wages as provided for in sections 2 and 3, respectively:

NIGHT.

\$2.00 per night the first and second weeks; \$2.25 per night the third and fourth weeks; \$2.50 per night the fifth and sixth weeks; \$2.75 per night the seventh week; \$3.00 per night the eighth week; \$3.25 per night the ninth week; \$3.35 per night thereafter.

DAY.

\$1.50 per day for the first and second weeks; \$1.75 per day the third and fourth weeks; \$2.00 per day the fifth and sixth weeks; \$2.25 per day the seventh week; \$2.50 per day the eighth week; \$2.75 per day the ninth week; \$2.85 per day thereafter.

9. In no case can a compositor working on a morning or afternoon paper on a linotype, typesetting, typecasting, or any machine displacing hand composition, receive less than one-half day's or night's pay.

10. None but members in good standing of the Typographical Union will be allowed to operate any linotype, typesetting, typecasting, or other machine displacing hand composition in any office under the jurisdiction of this union; provided, that regularly employed apprentices shall be privileged to practice on machines during the last three months of their apprenticeship.

11. When machine operators employed in machine offices are phalanxed, it must be done in rotation.

12. The office shall have the privilege of putting the machine operators on cases or other work to finish the night's or day's work, but in no case shall an operator receive less than his regular day's or night's pay.

13. The machinist shall not have control of the operators.

14. Lending and borrowing matter, except between morning and evening newspapers owned by the same individual, firm or corporation, is prohibited.

15. It shall not be considered the duty of the operator to wash or stack matrices, the operator confining himself to running in and out such matrices. All cleaning of the machines to be done by the office.

16. All machine tenders shall be members of the Typographical Union, and shall receive no less compensation than the scale provided for operators; provided, that overtime for machinists shall be construed to cover only such time as machines are run in excess of eight hours.

PRINTERS—IOWA CITY.

SCALE OF PRICES TYPOGRAPHICAL UNION NO. 515.

MACHINE SCALE.

1. All employes of composing and operating rooms must be members in good standing of the International Typographical Union.

2. All work done on machines and by floormen must be time work.

3. Operators of machines shall be selected from among the journeymen employes of the office in which the machines are to be used, provided such employes prove competent to operate machine.

4. Compositors employed on Mergenthaler machines shall receive \$15.00 per week for day work and \$16.00 per week for night work; on Simplex machines \$13.00 for night work and \$12.00 for day work. Nine hours shall constitute a day's or night's work; for overtime price and one-half shall be charged. Work between 6 P. M. and 6 A. M. to be considered night work and between 6 A. M. and 6 P. M. day work.

5. When operators are required to clean or otherwise care for machines, such work shall be included in, and paid for, as part of the regular day's work.

6. Beginners on machines shall serve an apprenticeship of fifty-four days of nine hours each, whether employment is continuous or not, for which the compensation shall be \$8.00 per week for eight weeks.

7. The office shall have the privilege of putting operators on cases to finish the day's or night's work, but in no case shall the operator receive less than the regular day's or night's pay.

8. Floormen shall receive not less than \$2.00 per day of nine hours and \$2.50 per night of nine hours work.

9. In no case shall an operator take an apprentice on his machine without the knowledge and consent of the company.

10. In offices where machines are used hand composition may be done under provisions of scale regulating hand composition; provided there is no conflict with section 7 of this scale.

11. A continuous run of proper names, statistical matter or market reports to the amount of 100 ems or over, shall be charged price and one-half; tables consisting of stub and one or more columns of figures, any matter in two or more columns, program and other leader work, double price, for purposes of measurement in machine composition.

12. Nothing in the foregoing shall be construed to prohibit the employment of one expert operator as instructor, in accordance with the provisions of section 1.

HAND SCALE.

1. None but members in good standing of the International Typographical Union to be employed.

2. Composition on morning papers printed in the English language shall be charged for at the rate of 25 cents per 1,000 ems; and on evening and weekly papers at the rate of 20 cents per 1,000 ems; compensation by the week shall be a sliding scale of \$12.00 to \$14.00 per week on morning papers and a sliding scale of \$10.00 to \$12.00 per week on evening papers; nine hours to constitute a day's or night's work; provided there is no conflict with section 7 of the machine scale.

3. Time work on newspapers to be charged for at the rate of 1,000 ems per hour when piece composition is used. Standing time (waiting for copy) at the same rate. No less than seven hours' composition (exclusive of lunch time) to constitute a day's or night's work.

4. Single column cuts to be measured by the compositor when originally used and justified by him or her.

5. Each office or department thereof shall be entitled to one apprentice until four journeymen are regularly employed; then one apprentice for each additional four journeymen.

6. A sliding scale of \$10.00 to \$12.00 per week shall be paid book and job printers; if employed by the piece 25 cents per 1,000 ems (agate to pica inclusive; larger type than pica to count pica). Nine hours each day for six days to constitute a week's work.

7. An employe cannot be laid off short of a full day when starting on time, unless mutually agreeable; when so, pay shall be pro rata with above. An employe hired at an hour after the regular starting time shall receive pro rata for all time to close of regular day.

8. In all offices all work required to be done after the regular day's work shall be paid price and one-half.

9. Foremen on morning papers shall receive not less than \$16.00 per week; on evening papers \$15.00 per week; job foreman \$15.00 per week; newspaper ad. man and assistant foreman, a sliding scale of \$10.00 to \$12.00 per week; apprentice (boy working in his fourth year) \$8.00 per week; fifty-four hours to constitute a week's work. All persons who are employers doing the work of foreman at any branch of the printing trade, under the jurisdiction of Iowa City Typographical Union, No. 515, must be active members of said union and entitled to all privileges and benefits of membership, save that of holding office.

10. Work on Sundays, New Year's, Decoration Day, Fourth of July, Labor Day, Thanksgiving and Christmas shall be paid price and one-half.

11. Matter containing three columns of figures or words, or three columns of words and figures, without rules (market correction excepted), shall be charged one and one-half price; also two columns divided by slugs or rules.

12. Matter containing three or more columns, with rules to be charged double price.

13. Matter containing four or more columns, with or without rules, to be charged double price.

14. Introductions, title headings and foot notes to tables in newspapers shall be considered part of the table when not making 100 ems.

15. All employes in the several departments shall be under the direct supervision of and be responsible to the foreman of the department in which employed who shall have the right to regulate the hours in accordance with the provisions of this scale.

PRINTERS—MUSCATINE.

SCALE OF PRICES OF TYPOGRAPHICAL UNION NO. 251.

MACHINE SCALE.

1. All employes of composing and operating rooms must be members in good standing of the International Typographical Union.

2. All work done on machines and by floormen must be time work.

3. Operators of machines shall be selected from among the journeymen employes of the office in which the machines are to be used provided, such employes prove competent to operate machines.

4. Compositors employed on machines and competent to set not less than 4,000 ems (lead 12 to pica brevier) per hour, shall receive not less than \$16 per week for night, and \$14.00 for day work, eight hours to constitute a day's or night's work; pro rata compensation for one hour per day overtime; for overtime exceeding one hour per day, price and one-half shall be charged. Work between 6 P. M. and 6 A. M. to be considered night work, and between 6 A. M. and 6 P. M. day work. Apprentices who are unable to make an average of 4,000 ems per hour after serving apprenticeship, to continue at \$14.50 for night work and \$13.00 for day work until they are able to maintain an average of 4,000 ems per hour. All time lost by reason of stoppage of machine to be added pro rata with the day's or night's average. When one operator corrects the proof of another, the excess of errors shall be credited to the operator correcting same, measuring double. Corrections and changes for which operator is not responsible shall also be measured double.

5. Where operators are required to clean or otherwise care for machines, such work shall be included in, and paid for as part of, the regular day's work.

6. Beginners on machines shall serve an apprenticeship of fifty-four days of eight hours each, whether employment is continuous or not, for which the compensation shall be:

First, second and third weeks, night, \$1.67; day, \$1.42; fourth and fifth weeks, night, \$1.92; day, \$1.67; sixth and seventh weeks, night, \$2.17; day, \$1.92; eighth and ninth weeks, night, \$2.42; day, \$2.17; thereafter, night, \$2.66 2-3; day, \$2.32 1-3.

7. The office shall have the privilege of putting operators on cases to finish the day's or night's work but in no case shall an operator receive less than the regular day's or night's pay.

8. Floormen shall receive not less than \$13.00 per week for night work of forty-eight (48) hours and \$13.00 per week for day work of fifty-four (54) hours.

9. In no case shall an operator take an apprentice on his machine without the knowledge and consent of the company.

10. In offices where machines are used hand composition may be done under provisions of scale regulating hand composition; provided, there is no conflict with provisions of section 7 of this scale.

11. A continuous run of proper names, statistical matter or market reports to the amount of 100 ems or over shall be charged price and one-half; tables consisting of stub and one or more columns of figures, any matter in two or more columns, programs and other leader work, double price, for purposes of measurement in machine composition.

12. All employes in the composing and operating rooms, shall be under the direct supervision of and responsible to the foreman of the composing and operating rooms, who shall have the right to regulate the hours in accordance with the provisions of this scale.

13. Employes holding the position of machinist shall receive a minimum of \$5.00 per week in addition to regular scale.

14. Nothing in the foregoing shall be construed to prohibit the employment of an expert operator as instructor, in accordance with the provisions of section 1.

HAND SCALE.

1. None but members in good standing of the International Typographical Union to be employed.
2. Composition on morning papers printed in the English language, shall be charged for at the rate of 35 cents per thousand ems; and on evening and weekly papers at the rate of 30 cents per thousand ems; provided there is no conflict with section 7 of the machine scale.
3. Composition on morning newspapers printed in the German language shall be charged for at the rate of 35 cents per thousand ems; and on evening and weekly papers at the rate of 30 cents per thousand ems; provided there is no conflict with section 7 of the machine scale.
4. Composition on daily papers to be by piece or time, at the option of the employer; provided there is no conflict with section 7 of the machine scale.
5. Time work on newspapers to be charged for at the rate of one thousand ems per hour, where piece composition is used. Standing time (waiting for copy) at the same rate. Not less than seven hours' composition (exclusive of lunch time) to constitute a day's or night's work.
6. Single column cuts to be measured when justified by the compositor.
7. Each office, or department thereof, shall be entitled to one apprentice until four journeymen are regularly employed; then one apprentice for each additional four journeymen.
8. A minimum of \$13.00 per week of 54 hours shall be paid book and job printers. If employed by the piece, 30 cents per thousand ems (agate to pica inclusive; larger type than pica to count pica.) When a regular night shift is employed, by the piece the price shall then be 35 cents per one thousand ems, and when employed on time \$13.00 per week of 48 hours.
9. Compositors employed by the week shall receive not less than \$13.00 per week consisting of fifty-four hours. An employe can not be laid off short of a full day when starting on time, unless mutually agreeable; when so, pay shall be pro rata with the above. An employe hired at an hour after the regular starting time shall receive pro rata for all time to close of regular day.
10. In all offices, all work required to be done after the regular day's work shall be paid one and one-half price.
11. In book and job offices, Sunday, Thanksgiving Day, Christmas, New Year's Day, Decoration Day, Fourth of July and Labor Day work, one and one-half price.
12. Foremen on morning papers, shall receive not less than \$17 per week; on evening papers not less than \$15.00 per week; job foremen, not less than \$16.00 per week. All persons who are employers doing the work of foremen at any branch of the printing trade, under the jurisdiction of Muscatine Typographical Union, No. 251, must be active members of said union and entitled to all privileges and benefits of membership, save that of holding office.
13. Assistant foremen on morning newspapers shall receive not less than \$15.50 per week; on evening papers and in job offices not less than \$13.50 per week.
14. Matter containing three columns of figures or words, or three columns of words and figures, without rules, shall be charged one and one-half price; also two columns divided by slug or rule.
15. Matter containing three or more columns, with rules, to be charged double price.
16. Matter containing four or more columns, with or without rules, to be charged double price.
17. Introductions, title headings and foot notes to tables in newspapers shall be considered part of the table, when not making 100 ems.
18. All employes in the several departments shall be under the direct supervision of, and be responsible to the foreman of the department in which employed, who shall have the right to regulate the hours in accordance with the provisions of this scale.

PRINTERS—OTTUMWA.

SCALE OF PRICES OF OTTUMWA TYPOGRAPHICAL UNION NO 73. ADOPTED JUNE 4, 1902, AND TO CONTINUE FOR THREE YEARS FROM AND AFTER SEPTEMBER 1, 1902.

Nine (9) hours shall constitute a day or night's work, except for machine operators, whose day or night shall consist of eight (8) hours.

Piece work, day, 30 cents per 1,000 ems; piece work, night, 33 cents per 1,000 ems; book work, 33 cents per 1,000 ems; job printers, per week, \$15.00; job foremen, per week, \$17.50; foremen morning paper, per week, \$18.00; foremen evening paper, per week, \$16.50; foreman weekly paper, per week, \$16.50; floor or ad. man, day, per week, \$15.00; floor or ad. man, night, per week, \$16.50; machine operator, day, per week, \$15.00; machine operator, night, per week, \$16.50; machinist operator, day, per week, \$16.50; machinist operator, night, per week, \$18.00; Machine tenders, day, per week, \$15.00; machine tenders, night, per week, \$16.50; Time work, 1,000 ems per hour for less than full day; overtime, one and one-third price; when called off of case for full day or week, \$2.50 per day; matter set with two justifications without rule one and one-half price; matter set with two justifications, with rule, two prices; matter set with more than two justifications with or without rule, two prices; Sunday work, one and one-half price.

All employees on morning papers working part day and part night shall receive the night scale.

NUMBER OF APPRENTICES.—One apprentice shall be allowed for every four journeymen printers or fraction thereof.

MACHINE APPRENTICES.—The term for which operators shall be bound to servé as apprentices shall be eight weeks, and the scale for the first two weeks of that period shall be \$1.50 per day of eight hours, and \$1.75 per night of eight hours; second two weeks, \$1.75 per day of eight hours, and \$2.00 per night of eight hours; and the last four weeks \$2.00 per day of eight hours, and \$2.25 per night of eight hours. If then the apprentice at the end of eight weeks, is competent as an operator he or she shall receive the full scale.

No person shall be allowed to learn the manipulation of the machine who is not a member in good standing of Typographical Union No. 73.

An operator working in a department where machines are in operation, but working on hand work, shall receive the existing scale for hand work.

ARBITRATION.—When a dispute arises between the proprietors and the union over the interpretation of the above scale, an appeal by either party shall be made within three days. Existing conditions shall continue until a decision is made by conference, and the matter in dispute shall be settled within thirty days from date of appeal. The point or points in dispute shall be rendered in full. No other question shall be introduced by the arbiters or considered by the arbitration committee, which shall be constituted as follows: Two members to be selected by the publishers, or proprietors, two members to be designated by the union, and these four to select a fifth person who shall be mutually acceptable. The decision of the arbitration committee shall be final and binding on both parties.

The proprietors signing this scale shall employ none but union men in the departments under the jurisdiction of the union, and shall give preference to the members of No. 73.

The above scale shall be signed on or before July 1, 1902, and shall be in full force and effect on and after September 1, 1902, and shall continue in force for three (3) years from September 1, 1902. *Provided* that either party to this agreement shall have the right to open the scale by giving thirty (30) days notice to the second party.

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PRINTERS—SIOUX CITY.

SCALE OF PRICES TYPOGRAPHICAL UNION NO. 150.

Day machine operators will receive \$20.50 per week, and night operators \$22.90. Job men will receive the old scale during the period of the new agreement but beginning June 1, 1903, to December 1, 1903, their hours will be fifty-one per week instead of the present fifty-four; from that date to June 1, 1904, they will be required to work forty-nine and one-half hours per week, and after the latter date only forty-eight hours.

TAILORS—BOONE.

BILL OF PRICES JOURNEYMEN TAILORS UNION LOCAL NO. 134.

COATS.—Dress coats, \$11.00; frock coats, single breasted, \$8.00; frock coats, double breasted, \$9.50; cutaway frock, \$7.00; Tuxedo, \$7.00; sack coat, single breasted, \$6.00; sack coat, double breasted, \$6.50; uniform sack, single breasted, \$5.00.

HEAVY OVERCOATS.—Single or double breasted \$9.00; sartout, \$10.00; raglan, \$9.50; light weight, \$8.00.

EXTRAS ON COATS.—All coats for try on, back and shoulder seams basted only, free of charge; second and other try on, 50 cents; welt seams, single stitch, 50 cents; welt seam, double stitch, 75 cents; silk to button holes, 50 cents; silk to edge, \$1.00; piped edge with velvet, \$1.00; corded edges, 50 cents; bound half and half, 50 cents; bound flat, \$1.00; hand stitched edge, \$1.00; all pockets over 4, each 25 cents; open vent in sleeves, 25 cents; cuffs on sleeves, 50 cents; cape on overcoat, \$1.50; neck pad, 15 cents; eyelet holes, each, 5 cents; open vent with button holes, 50 cents.

VESTS.—Vests, single, breasted, \$2.00; vests, double breasted, \$2.25; vests, single breasted, no collar, \$1.75.

EXTRAS ON VESTS.—Flat braid, 25 cents; bound half and half, 25 cents; stitched by hand, 25 cents, try on, 25 cents.

PANTS.—Pants, \$2.00; uniform, \$1.75.

EXTRAS ON PANTS.—broad falls, 50 cents; half or full lined, 25 cents; flaps on pockets, each, 12½ cents; spring bottom, 25 cents; belt loops, each, 2½ cents; welt seams, 15 cents; all pockets over 5, 15 cents.

BUSHMEN.—Bushmen to be paid not less per week than \$11.00. All overtime and extras not mentioned in this bill to be paid at the rate of 25 cents per hour. All tickets marked in plain figures with price and same put in each job.

A work-day of ten hours for bushmen.

TAILORS—MARSHALLTOWN.

BILL OF PRICES JOURNEYMEN TAILORS LOCAL UNION NO. 116, MARSHALLTOWN, IOWA.

COATS.—Dress coats, \$11.00; frock coats, double breasted, \$9.50; frock coats, single breasted, \$8.00; Tuxedo, \$7.50; cutaway frock, \$7.00; sack, double breasted, \$6.50; sack, single breasted, 6.00.

HEAVY OVERCOATS.—Frock, double breasted, \$10.00; sack, double breasted, \$9.50; sack, with fly, single breasted, \$9.50; raglan, \$9.50.

SUMMER OVERCOATS.—Sack, \$9.00.

VESTS.—Dress, \$2.00; fancy, double breasted, \$2.25; fancy, single breasted, \$2.00; double breast, \$2.00; single breast, \$1.75.

PANTS.—Doe skin, Tricot and other fine goods, \$2.00; common, \$1.75.

EXTRAS ON COATS.—Trying on dress coat or double breasted frock \$1.00; other coats, try on, 50 cents; second and other try on, 25 cents; lapped or welt seams, 50 cents; open bottom, 25 cents; silk to button holes 50 cents; silk to edge, \$1.00; piped edge with velvet, \$1.00; colored edges, 50 cents; bound half and half, 50 cents; bound flat, \$1.00; hand stitched edge, \$1.00; all pockets over 5 in number, each, 25 cents; flaps on frocks, 25 cents; pleats or vents in military sack, 25 cents; vent in sleeves, 25 cents; cuffs on sleeves, 50 cents; cape on overcoats, \$1.50.

VESTS.—Flat braid, 25 cents; bound half and half 25 cents; stitched by hand, 25 cents; serpentine, once around, 25 cents; try on, 25 cents.

PANTS.—Broad falls, 50 cents; serged seams, 15 cents; half or full lined, 25 cents; flaps on pockets, each, 12½ cents; double turn-up, 25 cents; spring bottom, 25 cents; belt loops, 15 cents.

BUSHMEN.—Bushmen not less per week than \$12.00.

Fred Hopkins.

Marshall Tailoring Company.

TAILORS—WATERLOO.

SCALE AND BILL OF PRICES OF JOURNEYMEN TAILORS LOCAL UNION, NO. 42.

This bill is to take effect October 7, 1901.

No change can be made in this bill by either party except on the fifteenth day of April, 1903.

Due notice must be given in writing at least two weeks previous to any intended change, or the bill stands good for another year.

UNDERCOATS.—Full dress, \$10.50; Prince Albert, \$9.00; single breasted Prince Albert, \$8.00; Tuxedo, \$6.50; cutaway frock \$7.00; double breasted sack, \$7.00; single breasted sack, \$6.00; raglan sack, \$7.00; skeleton sack, without canvas, \$5.00.

OVERCOATS.—Double breasted frock, \$9.50; double breasted sack, \$9.50; single breasted sack with fly, \$8.50; raglan, \$10.00.

EXTRAS ON COATS.—Try on, 50 cents; try on full dress and Prince Albert, 75 cents; skeleton try on, 75 cents; second and all other try on, 25 cents; stitched seams, single, 50 cents; stitched seams, double, 75 cents; strapped seams on overcoats, \$2.00; silk lining in sack and cutaway, 25 cents; silk lining in all other coats, 50 cents; silk lining to button hole, 75 cents; silk lining to edge, \$1.00; quilted lining in squares, \$3.00; quilted lining in stripes, \$2.00; quilted facing in squares, \$2.00; quilted body lining, 75 cents; top lined overcoat, 25 cents; interlining, 50 cents; bound facing, 25 cents; cape on overcoat, \$2.00; binding half and half sack, 50 cents; binding half and half, frock, 75 cents; binding half and half, Prince Albert and dress, \$1.00; binding, flat braid, \$1.00; corded edges, 50 cents; corded edges with velvet, \$1.00; edge stitches by hand, 50 cents; sleeves stitched top and bottom free of charge; cuffs, loose, 50 cents; cuffs, open and vent, 75 cents; vent in sleeves, imitation, 15 cents; vent in sleeves, open 25 cents; vent in sleeves, open with blind button hole, 35 cents; vent in sleeves, open with button hole, 50 cents; vents in coats, each, 25 cents; flaps on cutaway, 50 cents; sleeves sewed in by hand, 15 cents; fly in the vent on overcoat, 25 cents; skeleton sack, 50 cents; double button hole, each, 5 cents; sweat pad, 25 cents; open on bottom, 25 cents; neck pad, 15 cents.

VESTS.—Dress vest, \$2.25; double breasted, \$2.25; double breasted lapel, \$2.50; single breasted, fancy, \$2.25; single breasted, \$2.00.

EXTRAS ON VESTS.—Try on, 25 cents; binding half and half, 25 cents; binding flat, 25 cents; all pockets over five, 25 cents; eyelet holes, 15 cents; serpentine braid, per row, 25 cents.

PANTS.—Common, \$2.00; broad falls, \$2.50; dress, \$2.25.

EXTRAS ON PANTS.—Stitched seams, single, 25 cents; stitched seams, double, 35 cents; lining half and half, 25 cents; lining in full, 50 cents; braid or cord on side, 25 cents; flaps on pockets, each 15 cents, 2 for 25 cents; belt loops, each 5 cents; full baste, try on, 50 cents; all pockets over five, 25 cents; all seams sewed by hand, 50 cents; inside seams sewed by hand, 25 cents; fly on side pockets, each, 10 cents; imitation fly on broad fall, 15 cents; serged seams, 15 cents; puff in back, 10 cents; canvass in bottom, 15 cents; waistband bound, 15 cents; heel protectors, 10 cents; front protectors, 10 cents; strap under shoe, 25 cents; double turn up on bottom, 20 cents; bottom faced, 25 cents; seat lined, 15 cents; double seat, 20 cents; all pieces over four, each, 5 cents.

Bushelemen by the week, \$15.00.

All extras not mentioned on this bill 25 cents per hour.

R. H. Murphy.

F. Welland.

Frank Bros.

M. Klein.

J. N. Hagensen.

J. U. Winninger.

Cedar Falls—J. G. Clark.

H. J. Kelm.

TEAMSTERS—BOONE, IOWA.

SCHEDULE PRICES FOR TEAM WORK.

The General Teamsters Local, No. 279, Team Drivers International Union has adopted a partial scale of wages that will be in effect from this time on. The scale is not yet completed and will be extended from time to time as the business may demand it. The scale as now in force is:

Delivering paving brick to Boone, \$1.75 per thousand; delivering building brick, \$1.50 per thousand; delivering to Boonsboro 25 cents less; delivering sand brick to any part of the city, \$1.00; delivering sand and gravel, \$1.10 per yard; delivering coal to Boone, 75 cents per ton; delivering coal to Boonsboro 50 cents a ton; hauling ice 57½ cents a ton; general teaming 33 1-3 cents an hour for a nine hour day.

The prices on delivering coal will remain as above given until April 1st, when the schedule will be raised.

TEAM DRIVERS—DES MOINES.

1. The hauling price for lump coal for the period beginning with the twenty-seventh day of April, 1903, and continuing until the first day of April, 1904, shall be as follows:

Bloomfield, 50 and 60 cents; Maple Grove, 60 and 70 cents; Glenwood, 60 and 70 cents; Elko, 55, 60 and 65 cents; Midway, 60 and 70 cents; Eagle, 55 and 65 cents; Center, 55 and 65 cents; Keystone, 60 and 70 cents; Riverside, 70 and 80 cents; Flint Valley, 70 cents; Oak Park, 60 and 70 cents; O. K., 60 and 70 cents; double-headers or single tons from the mine, 10 cents extra per ton; hauling from the car, 45 cents per ton; 5,200 pounds to be the maximum load.

The above price contemplates the delivery of coal in a first-class and workmanlike manner. This clause shall not be construed to mean that the teamster shall be required to mow coal away or do any unreasonable or extraordinary work in the delivery of coal.

1½. The price for hauling steam coal shall remain the same as named in last year's contract, until November 1, 1903. On and after November 1, 1903, the price for hauling steam coal shall be the same as that paid for hauling lump coal. If the price of steam coal is advanced in the local market prior to November 1, 1903, it is agreed that the hauling price on steam coal shall be advanced at that time.

2. When C. O. D. orders are taken out and payment refused, or because of mistake in directions or for any good reason the coal cannot be delivered to the customer, it shall be the first duty of the teamster to go to the nearest 'phone, and ask for instructions; and if the office can give a near-by delivery for the coal, no extra charge shall be made for the delivery; but if necessary to return the coal to the office and re-consign from there, he shall be paid the regular haul plus 20 cents per ton.

3. At all railroad mines the teamster shall be given precedence over car business. In other words, if when the teamster arrives at the mine there are orders for coal, he shall be given the right of way over car business, and the superintendent of the mine shall direct the dump boss to put the coal on the custom chute until all teams with orders shall be loaded. The intention of this article is to give the teamsters an opportunity to do business without unnecessary waiting.

4. The Des Moines Coal Operators Association agree to hire only union teams and drivers, with the understanding that any teamster may work for a period not longer than one week, on his agreement to become a member of the union, and provided he shall make application to become a member of the union within the week, or at the next regular meeting of the Team Drivers Union. This clause shall apply also to dealers who may haul coal from any of the mines or from the cars of the Des Moines Coal Operators Association.

5. A list of bad places in city shall be compiled by the Team Drivers' Union and when approved by the Des Moines Coal Operators Association the owner or tenant of each place shall be given due notice by the Team Drivers Union that coal cannot be delivered without extra pay until the approach or place is put in such shape that a teamster with a good, ordinary team can drive in and unload the coal. A failure on his part to make a reasonable good ingress or egress to or from his coal repository shall be deemed sufficient reason to order that his coal be unloaded as near as possible to said repository, and that the regular carrying rate shall be charged for any extra labor necessary to put the coal away as required by the customer. Notice to be given by the Team Drivers Union in writing to the Secretary of the Des Moines Coal Operators Association of all such places listed who shall pay the extra rate for putting away coal, and said Secretary shall, after approval by the Des Moines Coal Operators Association, immediately notify all operators and dealers of said places.

6. All matters of difference between the Team Drivers Union and the Des Moines Coal Operators' Association regarding the interpretation of this agreement, or any matter of dispute not provided for herein, shall be submitted to the business agent of the teamsters union and the manager of the coal mine, who shall adjust the difficulty if possible. In the event they cannot agree, the matter shall be submitted to arbitration, they to compose two members of the arbitration board and together to select the third member. There shall be no appeal from the decision of the majority of the arbitration board.

It is expressly agreed that the time to be consumed in the settlement of any difficulty as above contemplated shall not exceed ten days after notice in writing from either party. There shall be no demands made which are in conflict with this agreement by either side, and it is expressly agreed and understood that there shall be no cessation of work pending the adjustment of any difficulty that shall arise during the existence of this agreement.

In case of a general sympathetic strike by all other crafts connected with the Trades Assembly when it is necessary for the parties to this agreement to take part therein to protect union principles, such action shall in no way be considered a violation of this agreement.

7. Each operator shall, in so far as possible and practicable, arrange the haul so that an industrious teamster with a reasonably decent team may make a good day's wages; but in no event shall the hauling price be more than hereinbefore named, excepting for such hauls as in the opinion of the operator warrant extra compensation.

This agreement shall be in full force on and after the twenty-seventh day of April, 1903, and shall continue until March 31, 1904.

Des Moines Coal Operators Association,
By John H. Gibson, President.
Team Drivers Union, Local No. 90.
N. B. Thomas, President.
M. J. O'Donohue, Business Agent.

TINNERS AND SHEET METAL WORKERS—CEDAR RAPIDS.

MEMORANDUM OF AGREEMENT MADE AND ENTERED INTO THIS FIRST DAY OF JANUARY, 1903, BETWEEN THE EMPLOYERS OF CEDAR RAPIDS AND THE AMALGAMATED ASSOCIATION OF SHEET METAL WORKERS LOCAL 263.

1. That the party of the first part will treat with its employees through the A. A. of S. M. W. Local 263 and its proper officers.

2. All sheet metal workers employed by the party of the first part shall be members in good standing of said association.

All employes now in the employ of party of the first part, and not members of said association, shall make application for membership at the time of the signing of the agreement.

New men shall make application at the time they are employed.

The association shall accept as members all persons who are eligible to membership therein.

3. In case of any sheet metal worker being laid off or discharged, the party of the first part shall, on proper request, inform such employe, the grievance committee or the President of the Sheet Metal Workers Local 263, why said employe was laid off or discharged. Should it be proven that said employe was unjustly laid off or discharged, he shall be reinstated and paid for all time lost.

4. Nine (9) hours shall constitute a day's work, with no reduction in pay.

5. The minimum wages of the sheet metal workers shall be two (2) dollars per day.

6. It is further agreed that any sheet metal worker being called on to work longer hours than their regular day, such sheet metal workers shall be considered as working overtime, and for such over-time shall receive time and one-half for all overtime and Sundays, and double time for holidays, Christmas, New Year's Fourth of July, Labor Day, Thanksgiving Day, to constitute holidays.

7. It is further agreed that this agreement shall be binding and in force from the first day of April, 1903, to the first day of April, 1904.

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President A. A. S. M. W. Local 263.
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Executive Committee A. A. S. M. W. Local 263.
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TINNERS AND SHEET METAL WORKERS—DES MOINES.

March 1, Amalgamated Sheet Metal Workers' Union No. 123, of Des Moines, gave notice to employers of the following scale:

1. That on and after June 1, 1903, the minimum scale of wages shall be 30 cents per hour.
 2. All workmen receiving 30 cents per hour or more on or before June 1, 1903, shall have an increase of $2\frac{1}{2}$ cents per hour.
 3. Time and one-half will be required for all overtime; double time for Sundays, Christmas and July Fourth. No work shall be done on Labor Day.
 4. Eight hours shall be a day, between the hours of 8 A. M. and 5 P. M.
 5. Work outside of Des Moines where the workmen can return daily, the firm shall pay transportation.
 6. Work outside of Des Moines, where workmen cannot return daily, the firm shall pay board and transportation for all workmen sent from Des Moines. On such jobs the men may work overtime for straight time.
 7. Shops employing on an average of four journeymen will be entitled to one apprentice.
 8. Helpers and drivers are not allowed to do any mechanical work.
 9. The above scale of wages shall be binding only as a minimum, leaving each individual the privilege of making himself more valuable to his employer.
 10. Employees wishing to work on outside work will be given a Building Trades Council card, issued quarterly, for \$1.50.
 11. Employees shall not work on jobs during a strike.
- If we do not hear from you on or before May 15th, we shall consider this as meeting with your approval.
- On Wednesday, June 3, 1903, every employer of tanners and sheet metal workers in Des Moines agreed to the proposition made by employees.

SHEET METAL WORKERS—SIOUX CITY.

CONTRACT OF AMALGAMATED SHEET METAL WORKERS WITH EMPLOYERS.

We, the undersigned, as employers, do this day join in contract with Local No. 51, Amalgamated Sheet Metal Workers, of Sioux City, Iowa.

1. We agree that from April 1, 1902, to April 1, 1903, nine (9) hours shall constitute a day's work except Saturdays, which shall be eight (8) hours.
2. All overtime shall be at the rate of time and one-half ($1\frac{1}{2}$), except Sundays, Christmas, Fourth of July and Labor Day, which shall be double time.
3. All help taken out of the city shall be paid the regular scale of wages and car fare to and from the job; and board to be arranged between the employe and the employer.
4. The wages to be \$2.70, as a minimum; and only members of the union shall be employed, except in cases of emergency, when non-union men may be employed, provided at the expiration of one week they become members of the union.
5. One apprentice will be allowed with every three (3) journeymen or fraction thereof. Said apprentice to serve three (3) years.
6. One helper to be allowed for every two (2) journeymen or fraction thereof; helpers to be discharged before journeymen.
7. It is our desire to better the condition of the journeymen of our craft and to work in harmony with the employers; in so doing we raise the standard of

ability in our mechanics, thereby not only benefitting the employer but the community at large. And, we intend to prove to the employer that it will be to his interest to sign this contract.

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 Employer.

 Committee.

THE ATCHISON, TOPEKA & SANTA FE RAILWAY COMPANY.

EFFECTIVE DECEMBER 1, 1902.

The following schedule of rates, rules and regulations are hereby agreed upon between this company and its locomotive engineers.

ARTICLE I.

INVESTIGATIONS, SUSPENSIONS AND DISMISSALS.—No engineer shall be suspended or dismissed from the service without first having a formal investigation, if desired, and his guilt established, except in aggravated cases such as serious collisions or intoxication.

There shall be a Board of Inquiry composed of the Superintendent, Master Mechanic, or their representatives, and one disinterested engineer employed on the division, who shall investigate the charges made. The right of appeal from local to general officers, also the right of engineers to act as committeemen, will be granted.

If any witness remains present at any investigation, any other witness or witnesses desiring to do so may also remain present at such investigation.

ARTICLE II.

EMPLOYMENT AND PROMOTIONS.—Engineers entering the service of the company for the first time, shall be employed by a mechanical superintendent or his assistant.

Fifty per cent of the engineers required shall be hired and fifty per cent promoted from the ranks of the firemen, if eligible.

The company reserves the right to vary from the provisions of this clause whenever conditions demand, or in the case of emergency.

ARTICLE III.

PASSENGER SERVICE—PAY AND HOURS PER DAY.—The compensation of engineers in passenger service shall be as follows:

RATE PER 100 MILES OR LESS PER DAY.

Districts.	8-Wheel.	10-Wheel, less than 100,000 lbs. on drivers.	10-Wheel, more than 100,000 lbs. on drivers.	Prairie.	Mogul.	Consolidation.
Chicago and Canyon City.....	\$3.50	\$ 3.50	\$ 3.65	\$3.75	\$3.75	\$ 3.75
Pueblo and Denver.....	3.85	3.85	3.85	4.00	3.85	4.40
La Junta and Raton, Las Vegas and Albuquerque.	3.75	3.75	3.90	4.00	3.90	4.00
Raton and Las Vegas and south of Albuquerque..	3.65	3.65	3.80	3.90	3.80	3.90

Over 100 miles will be paid pro rata.

Eight hours shall constitute a day's work for engineers in passenger service, and no overtime will be allowed until these hours are exceeded. When the schedule for any train exceeds eight hours, all delays, if more than fifty-nine minutes beyond the schedule time, will be paid for pro rata. Twenty miles per hour shall be considered the running time of irregular passenger trains. Trains consisting of business cars exclusively will be considered irregular passenger trains.

ARTICLE IV.

PAY FREIGHT SERVICE.—The compensation of engineers in freight service shall be as follows:

RATE PER 100 MILES OR LESS PER DAY.

Districts.	8-Wheel.	10-Wheel, less than 100,000 lbs. on drivers.	10-Wheel, more than 100,000 lbs. on drivers.	Prairie.	Mogul.	Consolidation.
Chicago and Canyon City.....	\$4.00	\$ 4.00	\$ 4.15	\$4.25	\$4.25	\$4.25
Pueblo and Denver	4.00	4.00	4.15	4.75	4.75	4.75
La Junta and Raton, Las Vegas and Albuquerque.	4.88	4.88	4.48	4.75	4.75	4.75
Raton and Las Vegas	4.15	4.15	4.80	4.60	4.60	4.60
South of Albuquerque	4.15	4.30	4.80	4.60	4.60	4.60
Starkville, Blossburg, Hebron and Waldo districts	4.25	4.2	4.25	4.25	4.25	4.25
Hot Springs and Santa Fee districts	4.00	4.00	4.00	4.00	4.00	4.00

Over 100 miles will be paid pro rata.

IN LOCAL SERVICE.—Engineers hauling local or way freight trains on main line between Chicago and Pueblo, including Emporia district and Hutchinson district, and from Ottawa to Chanute, also from Newton to Purcell and Florence to Winfield Junction via Eldorado district, shall be paid 25 cents per 100 miles in addition to rate applying to same class of engine on through run. Overtime pro rata.

SNOW PLOW SERVICE.—Engineers assigned to snow plow service will be paid at freight rates.

ARTICLE V.

MOUNTAIN AND HELPER SERVICE—PAY AND HOURS.—Engineers on all classes of engines assigned regularly to mountain service between Colorado Springs and Palmer Lake, Trinidad and Raton, Lamy and Glorieta, and Grama and Nutt shall be paid \$4.75 for twelve consecutive hours or less; all overtime to be paid at the rate of 47.5 cents per hour, and computed in periods of fifteen minutes.

Time of engineers in helper service commences at time set to depart, as designated in caller's book, and will continue for twelve hours, and thereafter until returned to home terminal.

For all mileage in excess of 100 made within the first twelve hours, engineers will be paid at the rate of 4.75 cents per mile in addition to regular day's pay of \$4.75; overtime in excess of twelve hours to be paid by the hour; no mileage made after twelve hours to be allowed.

Engineers on all classes of engines weighing less than 100,000 pounds on drivers, regularly assigned to helper service east of La Junta, shall be paid \$5.75 for twelve consecutive hours or less; all over twelve hours 37.5 cents per hour. For all mileage in excess of 100 made within the first twelve hours, engineers shall be paid 3.75 cents per mile in addition to regular day's pay of \$3.75.

On ten-wheel engines weighing more than 100,000 pounds on drivers, engineers shall be paid \$3.90 for twelve consecutive hours or less; all over twelve hours, 39 cents per hour.

If Prairie, Mogul or Consolidation engines are used in helper service east of La Junta, engineers shall be paid \$4.00 for twelve consecutive hours or less; all over twelve hours, 40 cents per hour.

Overtime in excess of twelve hours to be paid by the hour; no mileage made after twelve hours to be allowed.

When helper engines are used for road service and helper service on the same day, road rates will be paid for the entire day.

Engineers regularly assigned to helper service not making full time for the month, will be allowed a full month's pay at the established rate per day, provided they respond to each call for service during the month.

ARTICLE VI.

DOUBLES 100 TO 200 MILES.—Engineers in freight service, when making doubles only, the single of which is less than 100 miles and the double more than 100 miles, will be allowed two singles should the double consume to exceed sixteen hours.

ARTICLE VII.

WORK TRAINS—PAY AND HOURS.—Engineers in work train service shall be paid as follows:

East of Albuquerque.....\$3.75 per day.

South of Albuquerque.....3.90 per day.

All divisions on engines handling pneumatic ditcher.... 4.00 per day.

Twelve hours or less to constitute a day's work; overtime to be paid pro rata and computed in periods of fifteen minutes. When mileage made is 100 in twelve hours, pay shall be 4 cents per mile.

ARTICLE VIII.

FREIGHT SERVICE—HOURS PER DAY, OVERTIME AND TERMINAL SWITCHING—TERMINAL OVERTIME—WHEN SENT WITH OR FOR ENGINES.—Ten hours shall constitute a day's work for engineers in freight service and no overtime will be allowed until these hours are exceeded. Ten miles per hour shall be considered the running time of ALL FREIGHT TRAINS, and overtime will be paid only on trips the average speed of which does not reach ten miles per hour. Overtime will be computed in periods of fifteen minutes and paid for pro rata.

Switching done at terminals where no switch engines are employed will be paid for at overtime rates, provided time consumed in making trip exceeds ten hours or mileage made exceeds 100.

Stock loaded or unloaded at division terminals, if done by road crews, or where stock is loaded or unloaded between terminals by trains other than one hauling same, will be paid for at overtime rates, in addition to trip, if the time of trip exceeds ten hours or the mileage 100.

When a through or irregular freight crew, or a crew in local freight service not paid at the increased local rate, is held at a main line district terminal to exceed one hour, delayed time will be allowed and time on road will be computed from time of departure; this, however, not to apply on runs of less than 100 miles for which 100 miles are allowed. When through or irregular freight crews are delayed at any one point more than one hour loading or unloading material, they will be paid for such service at regular overtime rates, providing, however, that any time allowed for such service will not be paid for as overtime at the expiration of the run.

Engineers sent to Englewood for service, or delivering an engine to any point, or sent to any point to receive an engine, and held to exceed twenty-four hours, shall be allowed one day's pay in the class of service engaged for each twenty-four hours so held, the first ten hours of each twenty-four or portion thereof to be the time for which payment is made, except that no pay shall be allowed for the first twenty-four hours held.

ARTICLE IX.

SWITCHING AND TRANSFER—LUNCH HOUR.—The rate of pay of engineers of engines in transfer and switching service, shall be as follows:

Chicago and Corwith.....	\$3.15 per day.
Argentine and Kansas City Transfer.....	3.10 per day.
Argentine and Kansas City Switch.....	3.00 per day.
Strong City and Bazar Switch.....	4.00 per day.
La Junta and east thereof (except as above).....	2.90 per day.
West and south of La Junta.....	3.00 per day.

Ten hours or less shall constitute a day's work.

All over ten hours shall be paid pro rata, overtime to be computed in periods of fifteen minutes.

Except where special arrangements are made to cover, when switch engines are run outside of yard limits engineers will be paid road rates for the time so employed, but not in addition to the switching day.

Engineers in switching and transfer service will, if practicable, be given the sixth hour for lunch. If worked fifteen minutes over the sixth hour pay for one-half hour will be allowed. If worked over thirty minutes pay for one hour will be allowed. If worked the whole or part of the sixth hour they shall be allowed one hour's time in which to eat their lunch as soon as possible thereafter, but not later than the seventh hour.

ARTICLE X.

TIME ALLOWED WHEN CREW CALLED AND NOT USED.—When an engineer is called and not used, on account of train being abandoned, or for other cause, he shall be allowed pay for 33 1-3 miles for the class of service and engine for which called, and stand first out.

ARTICLE XI.

TIME ALLOWED FOR RUNNING LOCOMOTIVES LIGHT, DEADHEADING AND ATTENDING COURT.—Engineers running locomotives light will be paid passenger rates over each division.

Engineers deadheading under orders will be paid 2 cents per mile.

Engineers attending law suits, or performing other similar service in the interest of the company, shall be allowed \$4.25 per day east of La Junta, and \$4.75 per day west of La Junta, and necessary expenses.

ARTICLE XII.

REST.—Engineers shall not be required to go into service when they need rest, and when rest is needed they must report the fact to the roundhouse foreman when they register their arrival. Eight hours' actual rest shall be considered sufficient.

ARTICLE XIII.

SENIORITY.—Engineers shall be promoted according to seniority and ability, and their seniority shall be counted from the time of entering road service on their respective divisions.

ARTICLE XIV.

FIRST IN, FIRST OUT—SHORT RUNS.—Engineers will run first in first out of terminals.

Runs of fifty miles or less, on duty five hours or less, engineers will be allowed fifty miles and stand first out; if used again inside of five hours from time first called and total mileage exceeds 100, actual mileage will be allowed. If not called again inside of ten hours from the time first called, 100 miles will be allowed and stand last out.

Runs of over fifty miles and less than 100 miles, 100 miles will be allowed; overtime after ten hours.

ARTICLE XV.

INCREASING AND REDUCING FORCE.—The purpose of the company is not to assign any more engineers than are necessary to move the traffic with promptness and despatch. In case of light business the engineer youngest in service on the division, if hired, shall be laid off; if promoted, returned to firing service.

ARTICLE XVI.

PROMOTIONS TO PASSENGER SERVICE ON JOINT RUNS.—When passenger engines run over more than one division, freight engineers will be promoted to passenger service on each division in proportion to the mileage of each division over which the run extends.

ARTICLE XVII.

TIME PAY BEGINS AND ENDS.—Engineers' time will commence at the time of departure of train, as designated in caller's book, and trip tickets will be dated accordingly. In cases where the roundhouse register and train sheets conflict as to arrivals, the matter will be investigated, and if proper, the time taken from the roundhouse register.

ARTICLE XVIII.

PAY AND CALL OF ROAD ENGINEERS RUNNING SWITCH ENGINES.—When road engineers called upon to run switch engines are thereby deprived of making a trip on the road they shall be allowed road pay for the first day and switch pay thereafter. If not deprived of making a trip on the road switch pay shall be allowed.

When necessary to call a road engineer for switching service the first man on the extra board shall be called.

ARTICLE XIX.

HOSTLERS.—Hostlers shall be provided at division terminals, and such other points as may be agreed upon, whose duty it shall be to take engines upon arrival at the designated point in the yard. Engineers shall not be required to put away engines, clean fire or blow out front ends at such stations.

ARTICLE XX.

RIGHTS OF ENGINEERS TRANSFERRED.—Engineers after being permanently located on a division, who shall be transferred at the request of the company, shall have the privilege of returning to their respective divisions before any others are hired or promoted on the division from which they were transferred.

ARTICLE XXI.

ADJUSTMENT OF GRIEVANCES.—In case a difference of opinion as to the construction of this agreement shall arise between the engineers and division officers, a written statement of the questions at issue must be submitted by the engineers to the general manager, through the division officers and superintendent of motive power, to the general manager for his construction.

Grievances, to be considered, must be presented within sixty days after their occurrence.

ARTICLE XXII.

DATE IN EFFECT AND CONTINUATION OF AGREEMENT.—Upon the adoption of the foregoing schedule, rules and regulations, all previous schedules, rules and regulations shall be void.

This agreement shall be in effect from December 1, 1902, until thirty days' notice shall have been given by either party of a desire to change or terminate the same.

The Atchison, Topeka & Santa Fe R'y Co.,

H. A. Mudge, General Manager.

For Locomotive Engineers:

Myer Hurley, Chairman.

Irving Wellman, Secretary.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY.

REVISED DECEMBER 28, 1902.

ARTICLE I.

RATES.—1. Engineers promoted from firemen or dispatchers, and firemen, shall be paid for the different runs and kinds of service in accordance with the following tabulated statement of rates:

2. RUNS OF 100 MILES OR LESS IF MADE IN TEN HOURS OR LESS—

CLASS OF ENGINE.	Engineers' Road Rates.			Firemen's Road Rates.		
	Passenger.	Freight.	Way Freight.	Passenger.	Freight.	Way Freight.
8-Wheel.....	\$ 3.80	\$ 3.80	\$ 4.00	\$ 2.80	\$ 2.80	\$ 2.45
10-Wheel—B ¹ and B ²	4.15	4.20	4.85	2.90	2.90	2.70
Atlantic.....	4.00	4.00	4.20	2.40	2.40	2.55
B ² and B ⁴	4.80	4.40	4.40	2.75	2.75	2.85
Consolidation.....	4.50	4.50	4.70	2.50	2.50	2.95

3. On work, gravel and construction trains road freight rates apply.

4. SPECIAL RATES PER TRIP FOR FREIGHT CREWS ON C. & M. DIVISION—

8-Wheel.....		\$ 3.70	\$ 3.75		\$ 2.80	\$ 2.35
10-Wheel—B ¹ and B ²		3.85	3.95		2.85	2.45
Atlantic.....		3.80	3.95		2.80	2.45
B ² and B ⁴		3.95	4.00		2.50	2.60

5. First-year engineers in road service will receive 80 per cent of above rates.

6. On gravel, wood and construction trains, eleven hours, or less, shall constitute a day or trip. If mileage exceeds 100 miles, pay shall be computed on the mileage basis. If no regular roundhouse force is employed where such engines lay over Sunday, full time will be allowed.

7. If men on other than work trains perform work train service and such service exceeds one and one-half hours, they shall be paid for the same in addition to what they would have received if such work train service had not been performed. If time is over one hour and thirty minutes, two hours will be allowed, and so on. If the performance of such work train service increases the mileage for the trip, such work train mileage may be added to the regular mileage. If ordered for work train service and then required to haul a revenue paying train, regardless of the number of cars hauled, they shall be paid miles for the revenue train service and the actual hours employed for work train service.

8. Trains loading or unloading way freight or doing station switching shall be classed as way freight and enginemen shall receive compensation accordingly. This shall not be considered to apply to through trains setting out or picking up cars or handling small lots of local freight in case of emergency, or to branch lines, or to mixed trains except where special agreement may be made.

9. On runs ranging between 90 and 100 miles, once over the road shall be called a full day.

10. Switching service will be paid for at the following rates: Engineers, \$3.00 per day; firemen, \$1.90 per day except at Chicago, Milwaukee, St. Paul, Minneapolis, Savanna, Kansas City and Council Bluffs, where the rates will be: Engineers, \$3.15 per day; firemen, \$1.95 per day. Ten (10) hours to constitute a day's work.

11. In switching service for any period of eleven hours, engineers and firemen called and not wanted will be paid one-quarter of a day. If they work five hours

or less, one-half day; over five hours, one day. Engineers will receive one-half day for doing necessary work on engines on Sundays when engines are not in service, and the work has been performed. Firemen will be allowed full time on Sundays when the usual care is taken of the engine by them.

ARTICLE II.

OVERTIME.—Overtime for road engines shall be as follows:

1. On runs of 100 miles, or less, if the time on duty exceeds ten hours, such excess will be considered overtime. On runs of less than 90 miles, when the time on duty is ten hours or over, the rate will be the same as for runs of over ninety miles. Overtime on runs of less than ninety miles will be paid the same rates as allowed on runs of over ninety miles.

2. On runs exceeding 100 miles, if the time on duty, in hours, exceeds the number of miles divided by ten, all such excess will be considered overtime.

3. On gravel, wood and construction trains, if the time on duty exceeds eleven (11) hours, such excess will be considered overtime.

4. On switch engines, if the time on duty exceeds ten (10) hours, such excess will be considered overtime. Overtime for switch enginemen shall be computed in periods of five minutes or multiples thereof. The full amount of such overtime to be allowed at the end of each month.

Enginemen will be given an opportunity to go to their meals between the hours of 11:30 and 1:30 noon or night, if the work will permit.

If the work requires that they remain in service until or after 1:30 o'clock and they then take one hour for the meal, no overtime will be allowed.

If the work requires that they remain in service until or after 1:30 o'clock and they then take not to exceed thirty minutes for a lunch, one hour overtime will be allowed. After 1:30 the men may, if the work permits, decide whether they will take time for a meal or lunch.

ARTICLE III.

ALLOWANCE OF OVERTIME.—1. If, in making a run and doing necessary switching, overtime is thirty (30) minutes or less, no overtime shall be allowed. If more than thirty minutes and less than one hour and thirty minutes, one hour overtime shall be allowed. If more than one hour and thirty minutes and less than two hours and thirty minutes, two hours overtime shall be allowed, and so on.

2. Overtime shall be paid for at the rate of ten miles per hour, on basis of rate and classification.

3. Engineers in switching service shall be paid for overtime as follows: If the rate per day is \$3.00, one hour overtime shall be 30 cents. If \$3.15, 31½ cents.

4. Firemen in switching service shall be paid for overtime as follows: If the rate is \$1.90 per day, the rate for overtime shall be 19 cents per hour. If \$1.95 per day, the rate for overtime shall be 19½ cents per hour.

ARTICLE IV.

OVER-MILEAGE.—1. The rates for over-mileage will be as found in Article I.

2. On all runs, over-mileage shall be allowed for the number of miles in excess of 100 miles which have been actually made. Overtime and over-mileage shall not be both paid for the same run.

ARTICLE V.

EXCEPTIONS TO THE GENERAL SCHEDULE OF WAGES.—1. On the Chicago & Milwaukee Division enginemen in passenger service will be paid on the basis of actual mileage.

2. Enginemen in freight service will be paid by the trip, as fixed in Article I.

3. The Council Bluffs Division between Savanna and Marion will be figured as a ninety-mile division.

ARTICLE VI.

On runs of 100 miles or over, actual mileage made in doubling hills will be allowed. On runs of less than 100 miles, the mileage will be allowed if the mileage made in doubling, added to the mileage of the run, exceeds 100 miles.

ARTICLE VII.

1. When road enginemen are required to switch at terminal stations one hour or more where switch engines are regularly employed, they shall receive compensation for such service at road rates, viz: Ten miles per hour, no allowance to be made for less than one hour. One hour and thirty-one minutes to constitute two hours, two hours and thirty-one minutes, three hours, and so on.

2. At terminal stations where switch engines are not regularly employed and the mileage of the run is seventy miles or over, enginemen will be paid the same as at stations where switch engines are regularly employed, provided the time consumed in making the run is less than ten hours per hundred miles.

3. At terminals where switch engines are not regularly employed and the mileage of the run is less than seventy miles, no additional time will be allowed unless the time in making the run and doing the switching exceeds ten hours. This with the understanding that one hour will be allowed for each ten miles made. The intent of this latter clause is, that in case a run of sixty miles which might be made in five hours, the crew will be credited with six hours and may be required to switch four hours longer at the terminals without extra compensation. All time in excess of ten hours in such cases will be paid for at the road rates, viz: ten miles per hour.

4. This article does not apply to branch runs.

ARTICLE VIII.

All runs of less than 200 miles, where enginemen leave a terminal and run part way over the Division and return to the initial terminal, shall be considered turn-around runs and should be paid for as a continuous trip, except when men are relieved from duty at the turn-around point for five consecutive hours or over, in which case such lay-over time shall be deducted. On all runs where the mileage is 200 miles or over, each trip shall be considered separately and be paid for as such. The time to be deducted while laying at turn-around point, providing men are relieved from duty.

ARTICLE IX.

ABANDONMENT OF TRAINS.—In cases where trains are abandoned, enginemen having been called for duty, they will be paid for all time on duty and after taking charge of their engines until released. Time to be allowed in such cases will not be less than a quarter of a day. If, after leaving on a run, the train should be abandoned or the engine become disabled, through no fault of the engineer, and returned to the engine-house, time will be allowed in proportion to the number of hours employed or miles, if miles exceed the hours. Should the disabling of the engine prevent further mileage being made that day, one day will be allowed.

ARTICLE X.

ENGINES IN SNOW PLOW SERVICE.—When men are assigned to engines with snow plows attached and held for snow plow service, they will be paid full time. In cases where engines are working in the snow, and the men are trying to open the road, they will be paid hour for hour, so long as they are in such service. Or, when men and engines are caught in a storm on the road, and the engines are kept alive, the men will be paid as above. When engines are allowed to die on the road, through no fault of the men, full time will be allowed, viz: One day for every twenty-four (24) hours, provided the men remain with the engine and bring it home in good condition. When men are away from home over one day at a time, owing to snow blockades or washouts, their engines being properly housed, one-half

time will be allowed, men remaining subject to call. Time to begin after one day has expired. When men are assigned to engines with snow plows attached that engineers cannot see over, they shall not be required to pull trains.

ARTICLE XI.

Enginemen deadheading over the road in company's service will receive one-half time for full mileage if made on passenger trains, and full time for full mileage if made on freight trains, provided, that no less than a full day be allowed when no other service is performed that day. In case of lawsuits enginemen will receive full time and expenses for every day off, pay to be figured according to the class of engine men have been regularly employed on. One hundred miles to be considered a full day.

ARTICLE XII.

ENGINE DISPATCHER.—There shall be engine dispatchers at such stations or terminals as may be designated by the company, who shall take the engines to and from the round houses. Twelve hours shall constitute a full day for an engine dispatcher for which he will receive \$2.50. They will not be required to knock out fires or fire up engines.

ARTICLE XIII.

CALLING MEN.—At terminal or division stations where callers are employed, enginemen will be called, as near as practicable, one hour and a half before leaving time, provided they live within one mile of the place where they take charge of engine. The caller's book shall state the leaving time of trains, and the men who are called shall in each instance register their names, together with the time at delivered by enginemen to the dispatcher or on the track designated for that purpose which they are called. In computing overtime, time of men will begin at the time specified in the caller's book for the train to leave. Time will end when engine is posed.

ARTICLE XIV.

WHEN REST IS REQUIRED.—When enginemen have been in continuous service so long as to require rest, they will not be required to go out until sufficient time has been allowed them to recuperate, men to be the judges of their own physical condition.

ARTICLE XV.

PROMOTIONS AND TRANSFERS.—1. Promotions of enginemen will be made according to their age on the division to which they belong, if they are competent and worthy.

2. Enginemen's ages will rank from the date they enter the service in such capacity. This shall not affect the present standing of the men on any division or run. Exceptions may be made to this rule in cases of men incapacitated for full service.

3. Enginemen will run first in, first out, as far as practicable.

4. The company will not transfer enginemen from one division to another, permanently, against the wishes of the men; but if a request be made by the men to be transferred, they shall rank as new men on the division to which they are transferred.

5. When enginemen voluntarily leave the service of the company, and are subsequently re-employed, they shall rank as new men.

6. Enginemen may be transferred from one division to another for a trip at the company's convenience, but if on account of business or other conditions a definite temporary transfer is made, the men so transferred will be allowed to make full time.

7. Engineers shall not be transferred to a division where there are firemen eligible for promotion if the firemen are older in engine service than the engineer to be transferred.

ARTICLE XVI.

No engineman will be suspended or discharged without first having a fair and impartial hearing and his responsibility having been established, except in aggravated cases which in the opinion of the superintendent or master mechanic renders it unwise to continue the man in service. The investigation shall ordinarily be held within five days and enginemen whose case is being investigated shall not be required to lose more time than is absolutely necessary. He may have present, if he so desires, any other disinterested enginemen and the representative of the motive power department.

ARTICLE XVII.

SURPLUS OF ENGINEERS AND FIREMEN.—1. In the event of a surplus of engineers and firemen, the oldest men shall have the preference of employment, character, ability and merit being equal. As far as practicable the number of men in the service will be kept down to correspond with the volume of business, so that they may make not less than 3,000 miles per month. When an engine is shopped for repairs, the engineman will, when practicable, be assigned to another engine; when not practicable to do so, they shall have the preference of the extra men.

2. In case there is a vacancy in assigned runs, either on account of a new run being put on, or a run becoming vacant, the same shall be bulletined and assigned to the oldest competent engineer desiring the same.

3. In case a man loses his run on account of discontinuance of the same, he shall be given the run to which his age entitles him.

ARTICLE XVIII.

RETURNING TIME SLIPS.—When time is not allowed as per enginemen's time slips, the slips shall be returned and objections stated.

ARTICLE XIX.

TAKING CARE OF ENGINES.—1. If an engineer or fireman is required to take care of an engine at an irregular lay-over station, the one performing the duty will be paid for such service at regular rate of pay.

2. If enginemen are required to perform roundhouse or shop work at points where there is no roundhouse force employed, they shall make out in connection with the time slip, a work report showing in detail the work performed, and they shall be paid for the same in addition to the allowance for road service at the rate the class of engine entitles them to.

ARTICLE XX.

GRIEVANCES.—Any grievance that may arise shall be presented in writing, by the party aggrieved, to the proper officer of the company within sixty days of its occurrence. No attention will be paid to grievances unless presented in writing within the time specified above.

ARTICLE XXI.

APPEALS.—Any engineman suspended or dismissed shall have the right of appeal to the next higher officer in rank, and from him in proper order, up to the General Manager.

ARTICLE XXII.

1. Nothing contained in this schedule shall be construed as affecting the present rank of the men.

2. This schedule cancels all prior schedules and decisions made under the same, and is effective December 28, 1902.

Approved:

A. E. Manchester, Superintendent of Motive Power.
J. W. Barr, General Superintendent.
H. R. Williams, General Manager.

CHICAGO, ROCK ISLAND & PACIFIC RAILWAY.

EFFECTIVE FEBRUARY 1, 1903.

ARTICLE I.—SCHEDULE OF RATES.

ARTICLE I.

Class of Engine.	Class of Service.	Time.	Rate	ver- time.
Eight-wheel, 18 in. cylinder and under	Passenger	Per 100 miles or less...	\$ 3.70	Ots. 37
Eight-wheel, 19 in. cylinder	Passenger	Per 100 miles or less...	3.80	38
Eight-wheel with trailer, 20 in. cylinder	Passenger	Per 100 miles or less...	3.90	39
Six-wheel conn., 18 to 19 in. cylinder	Passenger	Per 100 miles or less...	3.90	39
Six-wheel conn., 20 to 21 in. cylinder	Passenger	Per 100 miles or less...	3.90	39
Eight-wheel, 18 in. cyl. and under..	Freight	Per 100 miles or less...	4.00	40
Eight-wheel, 19 in. cylinder	Local freight.	Per 100 miles or less...	4.25	42.5
Eight-wheel, 19 in. cylinder	Freight	Per 100 miles or less...	4.00	40
Eight-wheel, 19 in. cylinder	Local freight.	Per 100 miles or less...	4.25	42.5
Eight-wheel with trailer, 20 in. cyl.	Freight	Per 100 miles or less...	4.00	40
Eight-wheel with trailer, 20 in. cyl.	Local freight.	Per 100 miles or less...	4.25	42.
Six-wheel conn., 18 to 19 in. cylinder	Freight	Per 100 miles or less...	4.20	42
Six-wheel conn., 18 to 19 in. cylinder	Local freight	Per 100 miles or less...	4.40	44
Six-wheel conn., 20 to 21 in. cylinder	Freight	Per 100 miles or less...	4.30	43
Six-wheel conn., 20 to 21 in. cylinder	Local freight	Per 100 miles or less...	4.50	45
Consolidation, 22 in. cylinder	Freight	Per 100 miles or less...	4.40	44
Consolidation, 22 in. cylinder	Local freight	Per 100 miles or less...	4.60	46
19 in. cylinder and over	Switching	10 hours or less per day	8 10	81
17 and 18 in. cylinder	Switching	10 hours or less per day	8.0	80
16 in. cylinder and under	Switching	10 hours or less per day	2.90	29
All classes	Suburban	Between Chicago and Midlothian (if done within 18 hours), 100 miles, or less—addi- tional miles pro rata.	4.44	37

ARTICLE II.

On work, gravel and construction trains freight rates apply, according to classification.

Engineers who are assigned to road service without having served on switching service will receive 80 per cent of above rates for the first twelve months' service.

Engineers who have been in switching service and are assigned to road service will be given credit on the required twelve months' service for the time engaged in switching service.

ARTICLE III.

Engineers deadheading on company's business will be paid half mileage. When required by the company to attend court they shall be paid at the rate of \$4.00 per day for each calendar day of twenty-four hours or fraction thereof, provided no other work is done that day, and their expenses during attendance, and for all time lost while awaiting the company's orders and for such time as they may lose while waiting to take their run and for all services not otherwise provided in this schedule.

ARTICLE IV.

When engineers are held in for snow plow service they will be allowed regular rates according to classification for each twenty-four hours or less that they are so held subject to orders.

ARTICLE V.

On runs of 100 miles or over actual mileage made in doubling hills will be allowed. On runs of less than 100 miles the mileage will be allowed if the mileage made in doubling, added to the mileage of the run, exceeds 100 miles.

ARTICLE VI.

Freight engineers double-heading on passenger trains will receive passenger engineer's pay for the same.

ARTICLE VII.

Time of engineers in freight and passenger service shall be computed on the basis of 100 miles or less for a day's work; all time made by engineers while on duty in excess of 10 miles per hour will be considered overtime. Time on duty shall be considered as being from the time the train is ordered at initial terminals and end when relieved of care of engine at completion of day's work or run.

ARTICLE VIII.

On runs of 100 miles or more if engineers are required to do switching at terminal stations, either before leaving or after arrival at such terminal, they will be paid for all such switching at the rate of 10 miles per hour according to rate and classification, it being understood no allowance to be made for less than one hour; one hour and thirty-one minutes to constitute two hours, two and thirty-one minutes three hours, and so on. This with the understanding that one hour will be allowed for each 10 miles made. The intent of this latter clause is that in case of a run of 60 miles which might be made in five hours, the engineer will be credited with six hours and may be required to switch four hours longer at the terminal without extra compensation. All time in excess of ten hours in such cases will be paid road rates, viz: 10 miles per hour.

ARTICLE IX.

On work and construction trains twelve hours or less shall constitute a day or trip. If mileage exceeds 100 miles pay shall be computed on the mileage basis. If no regular roundhouse force is employed where such engines lay over Sunday, full time will be allowed.

ARTICLE X.

If men on other than work trains perform work train service and such service exceeds one and one-half hours, they shall be paid for the same in addition to what they would have received if such work train service had not been performed. If time is over one hour and thirty minutes, two hours will be allowed, and so on. If the performance of such work train increases the mileage for the trip, such work train mileage may be added to the regular mileage. If ordered for work train service and then required to haul a revenue paying train regardless of the number of cars hauled, they shall be paid miles for the revenue train service and the actual hours employed for the work train service.

ARTICLE XI.

Switching engineers will be allowed one full hour for dinner between 11:00 o'clock A. M. and 1:00 o'clock P. M. Should necessity of business prevent the use of the hour assigned, the engineer shall be paid overtime for it at the rate per hour regularly received by him.

The same rule will apply to night men between the hours of 11:00 o'clock P. M. and 1:00 A. M.

ARTICLE XII.

Engineers will be paid full time for breaking in engines after coming out of the shops, except where regular men are employed for that service.

ARTICLE XIII.

An engineer taking a switch engine over the road will be paid according to his class, second class road to be the minimum.

ARTICLE XIV.

As engineers who are promoted directly to road service without having been in switching service are required to work twelve months before being paid full rates under this schedule, an engineer's rights in road service shall commence with the date on which he is assigned thereto, with the understanding that should he be returned to switching or fireman's service he shall be given credit for the time made in road service when he again returns to road service.

ARTICLE XV.

An engineer ordered "deadhead" to or from any point will be regarded as "on company's business."

ARTICLE XVI.

Engineers will not be required to perform the duties of conductors except in emergencies, and in case of running light engines a flagman shall, when practicable, be sent with them.

ARTICLE XVII.

Engineers shall not be required to pack driving cellars, engine or tender trucks, valve stems or pistons, air pumps or engine throttles where facilities exist for such service by shop force.

ARTICLE XVIII.

No engineer shall be required to continue on duty when he reasonably needs rest, he to be the judge, but in extreme cases the engineers on their part will tender means in their power to assist the company, it being understood that trains shall not be unreasonably tied up between terminals and that due notice shall be given when rest is required, if possible to do so.

ARTICLE XIX.

Seniority in road service as locomotive engineer shall govern in all cases, switching service to be kept up by the newly promoted engineers until vacancies occur in road service. Engineers regularly assigned to switching service shall not be affected by this rule. The choice of runs shall be based upon this principle.

ARTICLE XX.

Engineers on assigned runs will stay on their runs regardless of engines furnished. When an engine goes into shop for general repairs or is assigned to other service the senior engineer will be furnished with another engine.

An engine held in for repairs for seven days or more will be considered in for general repairs. In such case engineers will be furnished with another engine in same class of service.

ARTICLE XXI.

When a deficiency of engineers in road service exists, engineers in yard service will be considered in the line of promotion to road service engineers.

ARTICLE XXII.

In case of a surplus of engineers the younger in the service shall be taken off and shall do extra work or firing. A surplus shall not be considered as existing while freight engineers are making 2,600 miles per month.

ARTICLE XXIII.

No engineer shall be dismissed or suspended from the service of the company without just cause, and should the engineer be unable to plead his own case at the investigation (which shall be heard within five days from the date of such suspension or dismissal, if possible for the superintendent to be present during

that period, and if not, at such early date as he may decide upon, when all interested can be present, and which shall be held before the superintendent and the division master mechanic, when both departments are interested), he shall be permitted to call upon some other engineer, or two if desired, in the service of the company who shall be permitted to plead in his case for him. In case an engineer believes his discharge or suspension unjust, he shall make written statement of the facts, within ten days from the date of such suspension or dismissal and submit it to the master mechanic, and the superintendent in conjunction with the master mechanic, together with the engineer dismissed or suspended, or his representatives, shall investigate the case in question, and if their decision is not satisfactory such engineer, his representative, or either, shall have the right of further appeal to the next higher officer in rank, and from him in proper order to the general manager, and when practicable such investigation shall be made within five days of the date of the receipt of a communication from the engineer; and in case the aforesaid discharge or suspension is decided to have been unjust he shall be reinstated and paid half time for all time lost. Any grievance that may arise on the part of the engineers shall be presented in writing to the proper officer of the company by the party aggrieved, within sixty days of its occurrence. No attention shall be paid to grievances unless presented in writing within the time specified above.

ARTICLE XXIV

A caller shall be furnished at the end of each main division who shall have a register book, and have written therein the train and time the men are called for, the time of calling and their names which shall be signed by the engineer when called.

Engineers called to make a train shall be paid for three hours' time on the basis of the regular rates which they are receiving, provided the train is afterward annulled and the engineer released, and shall have the same turn out as they did before being ordered out.

ARTICLE XXV.

When not otherwise required by the company's necessities, all freight engineers shall run first in and first out (except those assigned to regular runs) from all terminals and relay stations on their respective districts. All engineers running on extra list shall register on their arrival in a book provided for that purpose, and be called in rotation when the service of an extra man may be required, and shall remain with engine called for until the regular engineer returns, if his physical condition permits.

ARTICLE XXVI.

Engineers shall have rights on their respective divisions as they are now divided, viz:

Illinois Division.

Iowa Division.—Rock Island to Valley Junction. Valley Junction to Council Bluffs.

Des Moines Valley Division.

Missouri Division.—Rock Island to Eldon. Eldon west to Missouri River.

Nebraska Division.

Colorado Division.

Kansas Division.

Oklahoma Division.—Except main line between Chickasha and Terral.

Chickasha to Fort Worth.

Herington to Bucklin.

Bucklin to Santa Rosa.

Northern District.

ARTICLE XXVII.

Promotions and preferments will be based upon merit and the general record of the men, and not entirely upon their ages or duration of service. Evidences of the willingness of an engineer to serve the best interests of the company at all times in whatsoever capacity assigned, as well as economy in the running of his engine and care for the company's property while under his control, will always be considered as meriting reward.

ARTICLE XXVIII.

When a run becomes vacant, it shall immediately be bulletined and an engineer assigned as soon as possible thereafter.

The management trusts that the present volume of business will continue in order to make permanent the rates herein granted, and requests the hearty co-operation of enginemen in improving the service to this end.

The articles enumerated above constitute in their entirety the agreement between this company and its locomotive engineers, and all rules previously in effect are hereby abrogated.

Chicago, Rock Island & Pacific Railway, by

C. A. Goodnow, General Manager.

Locomotive Engineers, by

W. S. Stone, Chairman Committee.

CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA RAILWAY COMPANY.

EFFECTIVE MARCH 1, 1903.

ST. PAUL, MINNESOTA, February 25, 1903.

The following schedule will govern the employment and compensation of engineers and firemen. It will take effect March 1, 1903, and supersedes all previous schedule.

ARTICLE I.

FIRST YEAR'S PAY.—Section 1. Engineers promoted from firemen will be paid for the first year eighty (80) per cent of engineer's pay, according to rate and classification.

This rule will not apply to yard service. Twelve (12) months of twenty-six (26) days, ten (10) hours per day in road or yard service, to constitute first year.

RATES OF PAY—ENGINEMEN.

Sec. 2.

ROAD SERVICE.

Class of Engine.	Engineers.			Firemen.		
	Passenger.	Freight.	Way freight.	Passenger.	Freight.	Way freight.
8-Wheel, 18 in. cylinder and under	\$ 3.80	\$ 3.80	\$ 4.10	\$ 2.25	\$ 2.80	\$ 2.70
8-Wheel, 17 to 21 in. cylinder...	3.80	3.80	4.10	2.35	2.85	2.50
8-Wheel, conn., 18 to 19 in. cylinder	4.10	4.15	4.45	2.50	2.60	2.80
6-Wheel, class G1 and G2.....	4.10	4.25	4.55	2.60	2.75	2.90
6-Wheel, class I-1.....	4.10	4.40	4.70	2.60	2.75	2.90
10-Wheel with trailer	4.10	4.40	4.70	2.60	2.75	2.90

Sec. 8.

TRANSFER SERVICE.

	Engineers.	Firemen.	
Spooner and Itasca	\$3.70	\$2.50	Day's work to consist of 11 hours, or less.
St. Paul, Minneapolis and Minnesota Transfer	3.70	2.50	Day's work to consist of 10 hours, or less.

YARD SERVICE.

St. Paul, Minneapolis, Omaha, Sioux City, Itasca	\$3.00 2.95	\$2.00 1.95	NOTE.—A day's work to consist of 10 hours, or less.
Other points			
Pushing and helping engines	3.80	2.80	Day's work to consist of 10 hours, or less.
Hudson helper	4.10	2.70	Day's work to consist of 12 hours, or less.

EXTRA PAY FOR RUNNING SIX-DRIVER ENGINES.—Section 4. Engineers and firemen in switch transfer and helper service running six-wheel connected engines of cylinders 18x24, or larger, shall receive an extra compensation of thirty (30) cents per ten (10) hour or one hundred (100) miles.

WORKING ON ENGINES.—Section 5. Engineers on branch runs to be allowed not less than five (5) hours each week for working on their engines.

ARTICLE II.

SURPLUS MEN.—In the event of there being a surplus of engineers or firemen for the service of the road, the oldest engineers and firemen will have preference in employment.

ARTICLE III.

TIME—HOW COMPUTED.—The time of engineers and firemen shall be computed on basis of one hundred (100) miles or less or ten (10) hours or less for each day's work, and all mileage in excess of one hundred (100) miles or time in excess of ten (10) hours, shall be paid for pro rata. This applies to freight service only.

ARTICLE IV.

MINIMUM MONTHLY COMPENSATION.—Minimum monthly compensation will be based on a mileage of twenty-six hundred (2600) miles per month. If the mileage of a regularly assigned engineer or fireman is less than twenty-six hundred (2600) miles in any one month, and he has been ready for service, losing no time on his own account, full time for twenty-six hundred (2600) miles will be allowed.

This does not apply to men on extra list.

ARTICLE V.

SUSPENSION, DISMISSAL, INVESTIGATION.—No engineer or fireman shall be suspended or dismissed from the service of the company upon any charge without having a fair and impartial investigation before the division superintendent or superintendent of motive power and machinery, as the case may be, with the right of appeal to the general superintendent or the general manager. The investigation shall ordinarily be held within three (3) days. If charges are not sustained, compensation shall be allowed for time lost at rate of one hundred (100) miles per day. No punishment is to be fixed without a thorough investigation.

ARTICLE VI.

OLDER MEN TO HAVE PREFERENCE.—When new runs are put on or vacancies occur, they shall be bulletined on engine bulletin board for a period of ten days.

ENGINEERS RANK FROM DATE THEY PASS EXAMINATION.—The oldest engineers shall have choice of runs, if competent; otherwise next oldest shall be taken. Engineers shall rank from date they pass the required examination, but it is understood that in the event of a younger fireman passing the examination ahead of an older fireman, through no fault of the latter, the senior fireman shall assume his rank on engineers' list after passing the required examination, provided he does not fall on first examination. In such event the younger fireman shall hold rights ahead of him on engineers' list.

ARTICLE VII.

TIME ON DUTY DEFINED.—Section 1. In road service time on duty shall be considered as being from thirty (30) minutes before time train is ordered to leave initial terminal until relieved at destination. This to apply only when time is computed in hours. (This article to apply to transfers between East St. Paul and Minneapolis, and East St. Paul and Western Avenue.)

COMPUTING OVERTIME.—Section 2. In computing overtime one (1) mile will be allowed for each six (6) minutes worked.

ALLOWANCES IF CALLED AND NOT SENT OUT.—Section 3. After an engineer or fireman has been called and reports for duty he shall be paid for all time lost, such amount to be not less than one-quarter of a day.

DELAY ON ROAD.—Section 4. Engineers and firemen delayed on the road by accidents, washouts or snow shall be paid for all time lost, provided it exceeds one (1) hour. This shall apply to passenger service only.

DOUBLING HILLS.—Section 5. When required to double hills, engineers and firemen shall be allowed actual mileage, except when hours worked exceed number of miles run divided by ten (10.)

ARTICLE VIII.

SWITCHING AT TERMINALS.—Section 1. Engine crews will not be called on to do switching where switch engines are employed, except in case of absolute necessity.

Section 2. Extra compensation will be paid engineers when called upon to do station switching at terminal or turn-around points, provided a full day's work of ten (10) hours has been performed.

ARTICLE IX.

REST.—No fault shall be found with any engineer or fireman who refuses to go out without needed rest, ten (10) hours' rest being considered sufficient under ordinary circumstances.

ARTICLE X.

FIRST IN, FIRST OUT.—Engineers and firemen will run first in, first out, except those assigned to regular runs.

ARTICLE XI.

WITNESS PAY.—Engineers and firemen attending court under instructions from the company shall be paid at rate of one hundred (100) miles per day and living expenses while away from home.

Rate of pay shall be on basis of pay received when called for court duty.

ARTICLE XII.

DEADHEADING.—Engineers deadheading on company business shall be allowed one half mileage.

ARTICLE XIII.

RATES PAID DISPATCHERS.—Engine Dispatchers shall be paid \$2.50 per day of twelve (12) hours, day or night work. These positions are to be filled from the ranks of engineers or firemen who are eligible to promotion to dispatchers, oldest engineers or firemen to have preference.

ARTICLE XIV.

FREE TRANSPORTATION.—When change of a division or train run requires men to change their place of residence, they shall be furnished free transportation for their families and household goods.

ARTICLE XV.

FIRST OUT FOR ONE HOUR AFTER SHORT RUNS.—In case crews making short runs or "turn-around" trips are not called to go out within one (1) hour from time of arrival, their day's work shall be considered as having ceased, and listed as last out, it being understood that if making up of train ordered to go out at termination of hour noted above shall have been unavoidably delayed through no fault of the company, they shall take no advantage of any fractional part of second hour. Freight runs between Altoona and East St. Paul, Altoona and Spooner, Spooner and Ashland, or any similar runs, shall not be affected by this agreement.

ARTICLE XVI.

WHEN LARGER NUMBER OF EXTRA ENGINEERS ARE LISTED, GIVE SENIORS PREFERENCE.—Where such a large number of engineers are listed extra that many long in the service are not able to secure more work than some recently promoted, it is agreed that after assignment of such regular engineers as the company consider necessary under Article IV, there shall be a less number of engineers than theretofore bulletined as extra, and care taken to have seniors in service so listed and younger engineers provided with situations as engine dispatchers or firemen held by them previous to promotion, as soon as it can be conveniently arranged.

ARTICLE XVII.

DISCIPLINE IN CASE OF DAMAGE BY ACCIDENT.—In case of damage to property by accident, engineers shall not be called for a money consideration, but in such cases shall be disciplined by suspension or dismissal as circumstances may warrant.

ARTICLE XVIII.

LEAVE OF ABSENCE.—An engineer desiring to leave the motive power department to engage in train service or other business may, by written application to and under consent of the superintendent of motive power and machinery, have not exceeding six (6) months' leave of absence without affecting his priority right. This shall not affect engineers who are unable to work on account of sickness or injury.

An extra engineer may be given leave of absence not to exceed six (6) months, with permission to run an engine elsewhere. If he returns when wanted he will not lose his rights on engineer's list.

ARTICLE XIX.

RULES FOR CREWING EXTRA SNOW-PLOW ENGINES.—To avoid throwing regularly assigned freight and passenger engineers off their runs, it is agreed that when engine equipped with snow-plow is sent out, so far as practicable, assigned engineers who are running first in, first out, or engineers from extra list shall be taken, provided they have had sufficient rest and are familiar with the division on which snow-plow is to go out; but this shall not excuse any engineer from taking snow-plow engine if officially designated so to do. If extra list engineer be sent with plow, and before his return held on duty in charge of it at other points, he shall receive same detention time allowance as would be given regular engineers under like conditions. If engineer assigned to snow-plow engine has not had sufficient time to make thorough examination of engine and tools thereon, he shall not be censured for failure to give satisfaction when such failure is attributed to lack of necessary tools and good working condition of engine, intention being that

master mechanic or foreman in charge of engine house where extra plows are stored shall see that same are equipped with suitable tools, and engine and plow in proper condition for service.

ARTICLE XX.

TIME ALLOWED FOR EATING.—Engineers and firemen in yard service shall be allowed one (1) hour for eating between 11:30 A. M. and 1:00 P. M., and between 11:30 P. M. and 1:00 A. M. If required to work later than 1:00 P. M. or 1:00 A. M., thirty (30) minutes will be allowed and compensation given for full hour, thirty (30) minutes of which has been used in eating.

ARTICLE XXI.

NOTICE WHEN TIME NOT ALLOWED.—Notice will be given, with the necessary explanation, when time is not allowed as per trip report.

ARTICLE XXII.

RATES ON SPECIFIED RUNS.

Menomonie day run.....	{ Engineer, \$3.00 per day	} This covers overtime.
	{ Fireman, 2.25 " "	
Menomonie night run.....	{ Engineer, 3.25 " "	
	{ Fireman, 2.00 " "	
Stillwater day run.....	{ Engineer, 3.80 " "	
	{ Fireman, 2.25 " "	
Stillwater night run.....	{ Engineer, 3.25 " "	
	{ Fireman, 2.00 " "	
Pilot engine, St. Paul.....	{ Engineer, 4.25 " "	
	{ Fireman, 2.10 " "	
Spring Valley run.....	{ Engineer, 4.00 " "	
	{ Fireman, 2.55 " "	

ARTICLE XXIII.

WAY FREIGHT RUNS.—Following trains shall be classed as way freight runs, and compensation allowed as per Section 2, Article I:

WISCONSIN DIVISION.

Nos. 39 and 40 between Elroy and Altoona; Nos. 41 and 42 between Altoona and East St. Paul; Nos. 157, 158 and 159 between Stillwater and Ellsworth; Nos. 67 and 68 between East St. Paul and Spooner; Nos. 69 and 70 between Spooner and Bayfield; Nos. 103 and 104 between Eau Claire and Spooner; Nos. 107 and 108 between Spooner and Itasca.

MINNESOTA AND IOWA DIVISION.

Nos. 21 and 22 between St. Paul and St. James; Nos. 21 and 22 between St. James and Worthington; Nos. 29 and 30 between Worthington and Sioux City; Nos. 54 and 55 between Elmore and Lake Crystal; Nos. 33 and 34 between Worthington and Mitchell; Nos. 72 and 73 between Heron Lake and Pipestone.

NEBRASKA DIVISION.

Nos. 15 and 16 between Omaha and Sioux City; No. 13 Sioux City to Norfolk; Nos. 21 and 22 between Emerson and Norfolk.

ARTICLE XXIV.

EXCEPTIONS.—The Amendment to schedule of compensation of firemen dated October 27, 1900, and effective November 1, 1900, will not be affected by this agreement.

A. W. Trenholm, General Superintendent.
Lewis Sharpless, Secretary.
F. L. Hammer.
W. E. Perry.

G. C. of A. for the B. of L. E.,
J. H. Hall, Chairman.
M. C. Fitzgerald.

Approved: Jas. F. Clark, Second Vice President.

ILLINOIS CENTRAL RAILROAD COMPANY.

SCHEDULE OF WAGES OF LOCOMOTIVE ENGINEMEN AMENDED APRIL 1, 1903.

Adopted July, 1876; amended January, 1880; amended January, 1885; amended May, 1887; amended July, 1890; amended January, 1891; amended November, 1892, amended April, 1902.

ARTICLE I.

RATES OF PAY—ENGINEMEN.

MAIN LINE.

Size and Class of Engines.	Per Mile.					Spotting Cars in Gravel Pits, Per Day of 12 Hours.
	Passenger	Freight.	Mixed.	Local freight.	Work and helper.	
19½ and 20 inches.	3.70c					
Less than 19½ ins.	3.60c					
No. 639 and 640...		4.60c				
No. 1 and 551 class		4.25c				
Other classes		4.10c	3.85c	4.35c.	4.10c	\$ 3.60

BRANCH LINE.

Size and Class of Engines.	Per Mile.				Spotting Cars in Gravel Pits, Per Day of 12 Hours.
	Passenger	Freight.	Local freight.	Work and helper.	
19½ and 20 inches.	3.45c				
Less than 19½ ins.	3.35c				
No. 639 and 640...		4.35c			
No. 1 and 151 class.		4.00c			
Other classes.....		3.85c	4.10c	{ 8 Wheel 3.85c Mogul or 10 Wheel, 3.65c }	\$ 3.60

For engines with cylinders over 20 inches in diameter, and consolidated engines with cylinders 20 inches or over, add one-fourth ($\frac{1}{4}$) cent per mile to the 4.10c rate, for main line service and 3.85c rate for branch line service.

TRANSFER AND INCLINE SERVICE.

All points except East Cape Girardeau and Gale, per 10 hours, \$3.10; East Cape Girardeau and Gale (including switching), per 10 hours, \$3.10.

SWITCHING SERVICE.

Chicago, Memphis and New Orleans, per 10 hours, \$3.10; East St. Louis and Louisville, per 10 hours, \$3.00; Freeport, Rockford, and Council Bluffs, per 10 hours, \$2.95; Sioux City, per 10 hours, \$2.90; Carterville, per 12 hours, \$3.10; Kankakee, Champaign, Mattoon, Centralia, Du Quoin, Carbondale, Mounds, Cairo, Fulton, Jackson, Tenn.; Water Valley, Canton, Jackson, Miss.; McComb, Evansville, Paducah, Central City, Clinton, Ill.; Decatur, La Salle, Dubuque, Waterloo, Fort Dodge, Cherokee, per 10 hours, \$2.85; Murphysboro, Brookport, Springfield, Dixon and all other points not mentioned, per 12 hours, \$2.85.

SPECIAL SERVICE.

Attending court, per calendar day \$4.10; preparing engines for service, per hour, 41 cents; deadheading on company business, per mile 2 cents; held at dis-

strict terminal for transfer or engines, per hour for time beyond 15 hours, 41 cents; pull snow-plow, per hour, 60 cents held at intermediate points account snow blockades, washouts or other causes beyond control of the company, per hour for time between 15 hours, Sundays excepted, 41 cents. (*Not to exceed \$4.10 per 24 hours.* Watching or taking care of engines, per hour, 41 cents. (*Not to exceed \$4.10 per 24 hours.*)

NOTE.—See exceptions Article No. 50.

ARTICLE II.

Branch line rates will apply on the following districts: Onawa, Cedar Rapids, Dodgeville, Bloomington, Pontiac, Tracy, Rantoul, Havana, Decatur, Effingham (runs made between Matton and Switz City, via Newton and Effingham will be considered main line service), Eldorado, Owensbor, Evansville (Princeton to Hopkinsville), Dyersburg, Winfield, Gale branch, Mounds City branch, New Harmony branch, Carondelet branch, H. & E. branch, Uniontown branch and Troy branch.

ARTICLE III.

Enginemen employed in main line service, running over part of main line and part of branch line to make continuous trip, will be paid main line rate.

ARTICLE IV.

When there are two or more regularly scheduled freight trains on a branch line, one will be scheduled as local and paid local freight rate for branch lines.

ARTICLE V.

On runs of one hundred (100) miles or less in passenger, freight, local freight, mixed and work train service one hundred (100) miles will be allowed.

In switching, incline and transfer service regular crews working less than a day will be allowed a day's time, providing their working less than a day is not at their own request; if at their own request actual hours worked will be allowed.

Extra crews working five (5) hours or less will receive one-half day's pay; over five (5) hours, a day will be allowed.

ARTICLE VI.

Mileage allowances will be computed on actual miles made, including distances run for coal and water, turning on "Y's." to and from engine house and yard, where yards are located one-half mile or more from engine house.

In computing mileage no allowance will be made for fractional part of mile less than one-half.

Doubling grades not included in this article.

Time allowances will commence at leaving time of train as specified in call or on list, and will end when men are relieved from care of engine.

ARTICLE VII.

When enginemen are called more than one (1) hour before leaving time for the purpose of switching or making up trains, they will be paid at overtime rates for such service rendered.

ARTICLE VIII.

For initial terminal delay of one hour or more in main line freight service on runs of ninety miles or over allowance will be made at overtime rates for class of engine used—provided, the time consumed on the trip, including the delay at initial terminal, is as follows: ninety to 100 miles, eight hours; over 100 to 120 miles, nine hours; over 120 to 130 miles, ten hours; over 130 to 140 miles, eleven hours; over 140 to 150 miles, twelve hours; over 150 to 165 miles, thirteen hours; over 165 to 180 miles, fourteen hours; over 180 to 190 miles, fifteen hours; over 190 to 200 miles, sixteen hours.

When initial delay is allowed, overtime will be computed from time of departure of train from initial terminal.

For initial terminal delay of one (1) hour or more in main line local freight service, allowance will be made at local freight rate—time to be computed from time listed or ordered—overtime not deducted if made.

Initial delay of less than one (1) hour will not be considered; one (1) hour and thirty-one (31) minutes, two (2) hours will be allowed and so on.

On runs specified in Article L initial delay will be allowed on basis of miles, hours and provisions enumerated in Article VIII.

This does not affect overtime in main line passenger or work train service nor overtime in branch line service which is governed by Article XIII.

ARTICLE IX.

At terminals where regular switching engines are located, trains will be made up by yard crews.

ARTICLE X.

At terminals where yard men are employed, certain track or tracks will be designated as receiving tracks, and it will be the duty of the yardmen to keep these tracks clear for the reception of trains. If regular track is blocked some other track will be designated for the train.

ARTICLE XI.

A series of short runs in continuous service will be computed as a single trip.

Where a trip is completed over a district exceeding ninety miles, and on all local freight runs, they will not be computed in connection with other runs.

Enginemen returning from short trips shall report to engine house foreman for further orders before being relieved.

Where enginemen make a short trip and are relieved at end of said trip and later on make another short trip, and the two trips are not in continuous service they will be allowed 100 miles for each trip.

ARTICLE XII.

Trips turning at intermediate points of districts and completed within twenty (20) hours from the time listed to leave initial station, will be termed "turn-around" trips. Time on "turn-around" trips will be computed continuously, less time off duty at the turning point. When a "turn-around" trip is not completed within twenty (20) hours, it will be computed as a separate trip in each direction.

Where a turn-around trip of more than 100 miles is made terminating at a district terminal, it shall not be computed in connection with other runs.

Where a turn-around trip is made over a district exceeding ninety miles it will be paid as a single trip each way and computed on basis of Article V.

On a turn-around trip over a district of ninety miles or less, time will be computed and based on this Article XII.

ARTICLE XIII.

On passenger trips of one hundred (100) miles, or less, if the time on duty exceeds five (5) hours, such excess will be considered overtime.

On such trips exceeding one hundred (100) miles, if the time on duty in hours exceeds the number of miles allowed divided by twenty (20), all such excess will be considered overtime.

On freight trips of one hundred (100) miles or less, if the time on duty exceeds ten (10) hours, such excess will be considered overtime.

On such trips exceeding one hundred (100) miles, if the time on duty in hours exceeds the number of miles allowed divided by ten (10), all such excess will be considered overtime.

In local freight service overtime will be computed after eleven (11) hours on duty, on runs of one hundred (100) miles or less.

On trips exceeding one hundred (100) miles, overtime will be computed on the basis of ten (10) miles per hour.

In work train service, overtime will be computed after twelve (12) hours on duty on runs of one hundred (100) miles or less. On trips exceeding one hundred (100) miles, overtime will be computed on the basis of ten (10) miles per hour.

In switching service at Chicago, Kankakee, Champaign, Mattoon, Centralia, Du Quoin, Carbondale, Mounds, Cairo, Gale, East Cape Girardeau, East St. Louis, Clinton, La Salle, Decatur, Rockford, Freeport, Dubuque, Waterloo, Fort Dodge, Council Bluffs, Cherokee, Sioux City, Evansville, Louisville, Central City, Paducah, Fulton, Memphis, Jackson, Tenn.; Water Valley, Canton, Jackson, Miss.; McComb and New Orleans, overtime will be computed after ten (10) hours on duty. At all other points overtime will be computed after twelve (12) hours on duty.

In computing overtime, thirty (30) minutes or less will not be counted. Over thirty (30) minutes, one hour will be allowed; one (1) hour and thirty-one minutes (31) minutes, two (2) hours will be allowed, and so on.

Overtime will be paid for at the rate of ten (10) miles per hour in all classes of service, INCLUDING PASSENGER.

ARTICLE XIV.

Extra mileage for doubling hills will be allowed as follows:

ST. LOUIS DIVISION.—W st Belleville grade, on trips where actual mileage governs, five miles; Ozark grade, on trips where actual mileage governs, ten miles; Makanda to Cobden, twenty miles; Wetaug to Anna, thirty miles; Makanda to Anna, forty miles.

SPRINGFIELD DIVISION.—Salt Creek grade, five miles.

FREEPORT DIVISION.—Mendota to Sublette, twenty miles.

DUBUQUE DIVISION.—Waverly grade, five miles.

OMAHA DIVISION.—Cedar Falls grade, ten miles.

On all other trips one hundred (100) miles or over, when the tonnage of the train exceeds the tonnage rating of engine, actual mileage will be allowed.

ARTICLE XV.

Trips with light engine, caboose, pay car, officers' special or similar service running as sections of passenger trains, passenger train extra, or extra, at average speed of twenty (20) miles or more, passenger rate will be paid.

When running on freight schedule or extra at average speed of less than twenty (20) miles per hour, freight rates will be paid.

ARTICLE XVI.

Circus train service will be paid at freight rates for time consumed in making the run and switching train, and watching rates for taking care of engine at lay over point.

ARTICLE XVII.

When different classes of service are required of enginemen on the trip, or in one day, pay will be allowed at the prescribed rate for work preformed in each class of service.

In freight service on runs exceeding ninety miles, and all local runs, extra compensation will be paid for loading and unloading company's material, wrecking and other construction work, when time consumed aggregates one hour and thirty minutes, one hour will be allowed, one hour and thirty-one minutes to constitute two hours, and so on. Time so allowed to be deducted from overtime on trips if any is made.

When enginemen in freight service are required to side track trains and enter work train service and afterward resume and complete freight trip, allowance will be made at work train rate per mile or per hour for such work train service, and deduction made from overtime if any, thus accrued, on freight trip.

ARTICLE XVIII.

When enginemen are called and report for duty, and the train is annulled or set back and enginemen relieved, they will be allowed mileage at the rate of ten (10)

miles per hour for time so held; minimum of twenty-five (25) miles to be allowed; providing, they are not called again for duty within two and a half hours, and if called, to be allowed mileage at the rate of ten (10) miles per hour for time held, based on class of service for which called, and will stand first out.

ARTICLE XIX.

When the mileage of a work train exceeds one hundred (100) miles per trip, freight rates will apply.

ARTICLE XX.

Switching rates will apply to work train service performed by yard crews exclusively within terminal or yard limits.

ARTICLE XXI.

Enginemen in incline, transfer or switching service will be allowed one (1) hour for meals between 11:30 and 1:30 noon and midnight.

Men working until 12:35 will be allowed twenty-five minutes for lunch without loss of time.

ARTICLE XXII.

When enginemen are required to run over any portion of the road with which they are unacquainted, an engineman assigned to that district will be furnished as pilot.

Enginemen acting as pilots will be paid their regular rates for the trips made.

ARTICLE XXIII.

Enginemen held preparing engines for service will be paid not less than ten (10) hours if no other work is performed that day.

Men may not be called for such service when same will interfere with their proper rest.

ARTICLE XXIV.

Enginemen deadheading at the request of the company will be allowed time at the rate specified for mileage made.

ARTICLE XXV.

Watching rates will be paid to one member only of an engine crew unless both are required to be on duty at the same time.

ARTICLE XXVI.

Enginemen attending court at the request of the company will be allowed time at the specified rates, for calendar days lost, with necessary expenses not exceeding \$2.00 per day when away from home.

ARTICLE XXVII.

Enginemen attending investigations of accidents in which they are directly concerned, will contribute as much of their time without pay, as is necessary to determine the responsibility for same.

Enginemen not concerned, whose testimony is required, will be allowed a day's time for each calendar day so held, at rate for class of service in which regularly employed.

ARTICLE XXVIII.

No time will be allowed for learning the road, except that enginemen transferred from one division or district to another by the company will be paid one-half the regular rates for trips made learning the road.

ARTICLE XXIX.

Enginemen will report time of their firemen with their own. When time is not allowed as reported both engineer and fireman will be notified with reason for such action, and any additional information desired will be requested promptly.

ARTICLE XXX.

The classification of promoted firemen as junior enginemen is abolished.

ARTICLE XXXI.

It is the intention to run engine crews not on assigned runs, first in, first out, but the right is reserved to depart from this rule when the interest of the company requires it.

Enginemen on assigned runs will go on their runs regardless of engines furnished.

Enginemen on assigned runs, while laying over at terminals, will not be called to go out on unassigned runs except in cases of emergency, and when their services are so required, they will be duly notified.

Engines will be assigned and run as the interest of the company requires.

ARTICLE XXXII.

Enginemen will be allowed ten (10) hours' rest at terminals after sixteen (16) hours' continuous service.

ARTICLE XXXIII.

When necessary for an engineman to be relieved, he may so notify the superintendent by wire, and in case of sickness of himself or family a telegraphic pass will be furnished; if for other cause, transportation will be sent by engineer relieving him.

ARTICLE XXXIV.

Enginemen living within one (1) mile of engine house will be called at their registered residence for all trains.

Calling will be done, nearly as practicable, one (1) hour before the leaving time of train. Each man, when called, must sign the call book, which will show time called and time of departure of the train.

ARTICLE XXXV.

It is the duty of the extra enginemen to give close attention to the extra list. They must be prepared for duty when called, and must not be absent without permission.

ARTICLE XXXVI.

When necessary to decrease the number of enginemen in road service the senior enginemen will be given preference of work to the extent of full time.

Enginemen promoted in the service will be employed as switching enginemen or as firemen.

ARTICLE XXXVII.

Men transferred from one division or district to another permanently, will be considered as new men on the division or district to which they go, and will forfeit their rank on the division or district which they leave.

ARTICLE XXXVIII.

Men re-instated, retain their rank of seniority. Men re-employed, lose their former rank and enter service as new men.

ARTICLE XXXIX.

The right to assigned runs when vacancies occur, will be governed by seniority, merit and ability being equal. The man longest in service will have preference.

A man refusing run he is entitled to, will lose his right to same, except when vacancies occur. When vacancies occur, or new runs are created, the men to be notified of same by Bulletin.

In transferring enginemen temporarily from one district to another, the oldest unassigned enginemen will be given preference, and on return to home district will be given such work as entitled to.

Enginemen shall hold rights on their respective districts, and have preference of work irrespective of engines transferred from other districts.

When an engine is transferred from one district to another, the enginemen in charge will be furnished transportation to his home terminal and given such work as entitled to.

This Article shall not be construed as changing the rights of the men as they exist at present on the system.

ARTICLE XL.

Any grievance that may exist and is not rectified must be presented in writing by the party aggrieved, to the master mechanic or trainmaster within thirty (30) days of its occurrence, to the end that proper action towards its abatement may be taken without unnecessary delay. Enginemen shall not be dismissed or suspended without sufficient cause and after a fair and impartial investigation, excepting in aggravated cases or serious cause where responsibility is evident.

ARTICLE XLI.

A grievance not adjusted by the master mechanic or trainmaster within thirty (30) days may be appealed to the superintendent. From the superintendent appeal, if taken, must be to the next highest officer successively, and may finally be presented to the second vice president.

All communications on appeal must be in writing.

ARTICLE XLII.

When engines are "pooled" in road service they will be cared for at terminals by engine house force.

ARTICLE XLIII.

Headlights of engines laying over at terminals will be cleaned and cared for by shop force, where the company has engine house and shop organization.

Enginemen will be responsible for the condition of headlights when leaving terminals and while on the road.

ARTICLE XLIV.

Enginemen will not be required to coal engines between terminals, where chutes are not provided, except in cases of emergency.

ARTICLE XLV.

At the request of enginemen fires will be cleaned and when necessary at intermediate points on long freight runs where there are pits and men employed for that purpose.

ARTICLE XLVI.

Enginemen in road service will not be required to run engine backward after dark between stations, unless equipped with rear headlight and pilot, excepting in cases of emergency and doubling hills, or running for water.

ARTICLE XLVII.
SUBURBAN SERVICE.

From	To	Per Trip.
Chicago	Washington Park and return	\$ 1.05
Chicago	Sixty-Seventh Street and return	1.05
Chicago	South Chicago and return	1.25
Chicago	Grand Crossing and return	1.05
Chicago	Kensington and return	1.25
Chicago	Riverdale and return	1.35
Chicago	New Chicago and return	1.35
Chicago	Harvey and return	1.45
Chicago	Homewood and return	1.65
Chicago	Flossmoor and return	1.75
Chicago	Blue Island and return	1.45
Harvey	Union Stock Yards and return	1.35
67th Street	South Chicago and return	.65
Kensington	Blue Island and return	.65
Grand Crossing	Kensington and return	.55

ARTICLE XLVIII.

When called to heat suburban trains forty-five (45) minutes before leaving time, one (1) hour will be allowed; one (1) hour and thirty-one (31) minutes, two (2) hours will be allowed, and so on, at thirty-five (35) cents per hour.

ARTICLE XLIX.

Combination of Suburban runs will be made January 1st and July 1st of each year, and the senior enginemen will have the preference of combination.

ARTICLE L.

The following exceptions are made to rates shown in Article I, and will apply between points as specified—Rules and Overtime Rates, Schedule 1892 to govern:

PASSENGER

Division.	From—	To—	Class of Engine.		
			8-wheel per trip.	Mogul or 10-wheel per trip.	Consolidation per trip.
Chicago	Chicago	Kankakee and return	\$ 4.10	\$ 4.20	.....
Chicago	Chicago	Harlem and Hawthorne	3.85	3.95	.....
Springfield	Champaign	Decatur and return (mixed)	3.85	3.95	.....
Springfield	Clinton	Pana (mixed and return pass)	4.15	4.25	.....
Dubuque	Waterloo	Dubuque	3.95	4.05	.....
Omaha	Waterloo	Fort Dodge	3.15	4.05	.....
Cherokee	Fort Dodge	Sioux City	4.90	5.00	.....
Cherokee	Cherokee	Sioux Falls	3.85	3.95	.....
Cherokee	Onawa	Cherokee and return	4.20	4.30	.....
Mississippi	Memphis	Grenada	3.75	3.85	.....
Mississippi	Memphis	Grenada (mixed)	4.00	4.10	.....
Louisiana	Canton	McComb	3.70	3.80	.....
Louisiana	McComb	New Orleans	3.85	3.95	.....
Louisiana	Jackson, Miss.	Greenwood	3.70	3.80	.....

FREIGHT.

Chicago	Chicago	Kankakee	\$ 3.60	\$ 3.70	\$ 3.85
Chicago	Chicago	Kankakee and return	4.90	4.40	4.85
Chicago	Fordham	Kankakee and return	3.60	3.70	3.95
Chicago	Fordham	Kankakee	3.00	3.05	3.20
Chicago	Kankakee	Kensington and return	3.20	3.30	3.45

+Chicago	43rd Street	Stock Yards and return	\$ 1.25	\$ 1.25	.....
+Freeport	Hawthorne	Stock Yards and return	1.25	1.25	.....

+NOTE—If time consumed in making trip amounts to four (4) hours, forty (40) miles will be allowed, and ten (10) miles for each additional hour.

FREIGHT.

Division.	From—	To—	Class of Engine.		
			8-wheel per trip.	Mogul or 10-wheel per trip.	Consolida- tion per trip.
Freeport	Freeport	Dodgeville and return. . .	\$ 4.95	\$ 5.05	.....
Springfield . . .	Clinton	Havana and return (mixed). .	4.99	5.05	.....
Cherokee	Cherokee	Onawa and return.	4.65	4.75	.....
Tennessee	Jackson, Tenn. . . .	Paducah	4.80	4.65	.....
Tennessee	Mounds	Jackson, Tenn.	4.80	4.90	\$ 5.10
Tennessee	Mounds	Memphis	7.40	7.40	7.40
Tennessee	Jackson, Tenn. . . .	Water Valley . . . . .	.....	.....	5.10
Tennessee	Paducah	Fulton	2.00	2.00	.....
Tennessee	Paducah	Memphis	7.28	7.26	.....
Tennessee	Memphis	Fulton	5.81	5.81	.....
Tennessee	Cairo	Memphis	7.85	7.40	7.45
Tennessee	Mounds	Martin . . . . .	.....	8.70	8.85
Tennessee	Mounds	Martin and return. . . . .	.....	5.00	5.85
Tennessee	Mounds	Fulton . . . . .	.....	2.45	2.80
Tennessee	Mounds	Fulton and return. . . . .	.....	4.10	4.45
Tennessee	Mounds	Martin, Fulton to Jackson. .	.....	5.45	5.95
Tennessee	Mounds	Milan, Tenn. . . . .	.....	8.95	4.05
Tennessee	Mounds	Milan and return . . . . .	.....	7.80	7.95
Tennessee	Jackson	Martin . . . . .	.....	2.15	2.40
Tennessee	Jackson	Martin and return. . . . .	.....	4.25	4.70
Tennessee	Jackson	Fulton, Ky. . . . .	.....	8.20	3.85
Tennessee	Jackson	Fulton and return. . . . .	.....	5.25	5.60
Tennessee	Jackson	Milan, Tenn. . . . .	.....	2.05	2.20
Tennessee	Jackson	Milan and return . . . . .	.....	2.05	2.20
Louisville	Paducah	Henderson	5.70	5.70	.....
Louisville	Cecilila	Hodgenville and ret. (mix.). .	4.85	4.85	.....
Louisville	Morganfield	Uniontown, per day (mix.). .	4.10	4.10	.....
Mississippi	Memphis	Grenada	4.10	4.20	.....
Louisiana	Canton	McComb	4.25	4.85	.....
Louisiana	McComb	New Orleans	4.25	4.35	.....
Louisiana	McComb	Harahan	4.25	4.85	.....

LOCAL FREIGHT.

Freeport	Freeport	Amboy and return	\$ 4.25	\$ 4.35	.....
Tennessee	Paducah and Moffatt	Newbern, Troy	4.55	4.55	.....
Tennessee	Newbern	Memphis	4.71	4.71	.....
Louisville	Central City	Paducah	4.55	4.55	.....
Louisville	Princeton	Henderson	4.55	4.55	.....

MISCELLANEOUS SERVICE.

	Class of Engine.	
	8-wheel.	Mogul or 10-wheel.
Switching at Belleville, and running to East St. Louis and Carondelet, per 12 hours	\$ 3.85	\$ 3.85
Transfer service—Henderson and Majors—McClain and Evansville, per 12 hours	8.60	8.60

ARTICLE LI.

When the number of miles run per trip, on districts and in class of service covered by Article 50, multiplied by the rate per Article No. 1, equal or exceeds the wages earned per trip between the points specified in Article 50, rates will apply as per Article No. 1.

ARTICLE LII.

All schedules, rules and regulations in conflict with these now adopted are void.

ARTICLE LIII.

This agreement shall remain in effect until revised or abrogated, of which intention thirty (30) days' written notice shall be given.

Approved:

W. Renstraw, Superintendent of Machinery.

J. F. Wallace, General Manager.

J. T. Harahan, Second Vice President.

Accepted on behalf of enginemen:

Humphrey Roberts, Chairman.

R. M. Griffith, Secretary.

CHICAGO GREAT WESTERN RAILWAY.

SCHEDULE OF COMPENSATION AND REGULATIONS DEFINING RIGHTS
AND DUTIES OF ENGINEMEN, TRAINMEN, SWITCHMEN,
OPERATORS AND OTHER EMPLOYES.

EFFECTIVE APRIL 1, 1903.

1. ENGINEMEN—

Passenger Train Service.

Standard engines*	Engineers, 3.80 cents per mile
	Firemen, 2.30 cents per mile
Mogul, ten-wheel or prairie engines.....	Engineers, 4.00 cents per mile
	Firemen, 2.40 cents per mile
Consolidation engines	Engineers, 4.50 cents per mile
	Firemen, 2.75 cents per mile

Freight, Helping or Work Train Service.

Standard engines*	Engineers, 3.80 cents per mile
	Firemen, 2.30 cents per mile
Mogul engines	Engineers, 4.00 cents per mile
	Firemen, 2.40 cents per mile
Ten-wheel engines†	Engineers, 4.25 cents per mile
	Firemen, 2.60 cents per mile
Prairie engines	Engineers, 4.30 cents per mile
	Firemen, 2.65 cents per mile
Consolidation engines	Engineers, 4.50 cents per mile
	Firemen, 2.75 cents per mile

Way Freight Train Service. Extra Compensation.

Standard and mogul engines.....	Engineers, .15 cents per mile
	Firemen, .10 cents per mile
Ten-wheel, prairie and consolidation engines.....	Engineers, .30 cents per mile
	Firemen, .20 cents per mile

St. Paul and Minneapolis Transfer Service.

Standard engines	Engineers, 33.0 cents per hour
	Firemen, 23.0 cents per hour
Mogul engines	Engineers, 35.0 cents per hour
	Firemen, 24.5 cents per hour
Ten-wheel, prairie and consolidation engines.....	Engineers, 38.0 cents per hour
	Firemen, 27.0 cents per hour

De Kalb, Cedar Falls & Mantorville Branches.

All classes of engines.....	Engineers, 35.0 cents per hour
	Firemen, 23.0 cents per hour

* All four-wheel connected passenger or freight engines.

† Including engines 150 and 151.

Switching Service.

Chicago, St. Paul and Minneapolis, engines with cylinders less than 19 inches.....	Engineers, 30.0 cents per hour
	Firemen, 19.5 cents per hour
19 inches and over.....	Engineers, 31.5 cents per hour
	Firemen, 21.0 cents per hour
Dubuque, Oelwein, Des Moines, St. Joseph & Kansas City, engines with cylinders less than 19 inches..	Engineers, 29.0 cents per hour
	Firemen, 18.5 cents per hour
19 inches and over.....	Engineers, 30.5 cents per hour
	Firemen, 1.95 cents per hour
All other stations, engines with cylinders less than 19 inches	Engineers, 27.5 cents per hour
	Firemen, 17.5 cents per hour
19 inches and over.....	Engineers, 28.5 cents per hour
	Firemen, 18.0 cents per hour

2. TRAINMEN—

Passenger Train Service.

Main line through and milk trains, scheduled runs of 6,000 miles or less.....	Conductors, \$134.40 per month
	Brakemen, 64.40 per month
Over 6,000 miles and on Extra Trains or Sections.....	Conductors, 2¼ cents per mile
	Brakemen, 1½ cents per mile
Chicago, Suburban, W. M. & P. and Fort Dodge Div's scheduled runs of 5,250 miles or less.....	Conductors, \$112.00 per month
	Brakemen, 56.00 per month
Over 5,250 miles and on extra trains or sections..	Conductors, 2¼ cents per mile
	Brakemen, 1½ cents per mile
St. Paul Motor.....	Conductors, \$100.80 per month
	Brakemen, 56.00 per month
De Kalb Branch.....	Conductors, \$ 92.00 per month
	Brakemen, 69.00 per month
Cedar Falls Branch.....	Conductors, \$ 72.80 per month
	Brakemen, 39.20 per month
Mantorville Branch	Conductors, \$ 84.00 per month
	Brakemen, 56.00 per month

Freight Train Service.

Way Freight Main Line.....	Conductors, 3.80 cents per mile
	Brakemen, 2.55 cents per mile
Way Freight, W. M. & P. and Ft. Dodge Divisions.....	Conductors, 3.6 cents per mile
	Brakemen, 2.4 cents per mile
Other Freight and Work Trains.....	Conductors, 3.45 cents per mile
	Brakemen, 2.30 cents per mile
Freight trainmen making five days or less in passenger service	Conductors, 3.45 cents per mile
	Brakemen, 2.30 cents per mile
More than five days.....	Conductors, ¼ cents per mile
	Brakemen, 1½ cents per mile

3. SWITCHMEN—

Chicago, St. Paul, Minneapolis, St. Joseph, Kansas City, Oelwein.....	Night Foremen, 33 cents per hour
	Day Foremen, 31 cents per hour
	Night Helpers, 30 cents per hour
Dubuque, Des Moines.....	Day Helpers, 28 cents per hour
St. Charles, Waterloo, Marshalltown, Fort Dodge, Clarion, Hayfield, Red Wing.....	Foreman, 30 cents per mile
	Helpers, 27 cents per hour
Plots	Engineers, 3.8 cents per mile
	Others, 3.45 cents per mile

For coaling engines on the road—ten miles to each of not more than two men actually engaged in shoveling coal.

5. The time-table mileage for freight trains between Fair Ground and Oelwein and between St. Joseph shops and Kansas City will be considered eighty-five miles.

In addition to the time-table mileage freight and work train enginemen and trainmen will be allowed extra mileage as follows:

For doubling hills, or running for coal or water—actual mileage.

For switching at beginning or end of run where switch engines are employed, and at Hayfield, Clarion, Ft. Dodge and Fair Ground, when those stations are terminals—ten miles per hour.

For going to Union Stock Yards, Chicago—ten miles per hour with a minimum of twenty miles; time to be computed from time of arrival at Chicago Yard to time of arrival at yard on return trip.

For delay before departure—ten miles per hour. If less than one hour no time to be allowed.

For delay at end of trip—ten miles per hour for the time in excess of fifteen minutes.

For overtime—ten miles per hour for all time on duty in excess of one hour for each ten miles allowed, except miles allowed for terminal switching and delay. Time in duty will be reckoned from the leaving time of train as specified in call to the arrival of train on designated track at end of trip. If engine is required to leave engine house track more than thirty minutes before leaving time of train as specified in call, time for enginemen will commence at the time engine is required to leave engine house track. Overtime on round trips exceeding 150 miles will be computed separately in each direction.

For temporary work train service men will be paid mileage to and from work and ten miles per hour for time worked.

6. Constructive time or mileage will be allowed engine, train and yard men as follows:

In case an engineman or trainman is called for a run and after reporting for duty the run is annulled, he will be paid for time lost, the time lost not to be counted less than twenty-five miles or $2\frac{1}{2}$ hours.

In case a man is called for any service, and makes fifty miles or five hours or less, enough constructive time or mileage will be allowed to make fifty miles or five hours. No constructive mileage will be allowed for helper service where the actual mileage made is 100 miles or more per day of twenty-four hours.

In case a man is called for any service and makes more than fifty miles or five hours, but less than 100 miles or ten hours, enough construction mileage will be allowed to make 100 miles or ten hours, except that eighty-five miles will be allowed for through freight runs in either direction between Fair Ground and Oelwein and between St. Joseph shops and Kansas City.

Engine and trainmen assigned to work train service will be paid a minimum of 100 miles per working day for period worked.

7. Time slips not allowed will be returned with objections noted thereon.

8. If a train crew accompanies a light engine, such crew shall be in charge of the train, and receive full compensation.

9. When trains are laid up, time will only be allowed to the man or men required to take care of or watch engines.

10. Enginemen and trainmen deadheading under orders on passenger will be allowed one-half time. On freight they will be allowed full time at following rates, with overtime, if any: Enginemen, \$3.80; firemen, \$2.30; conductors, \$3.15; brakemen, \$2.30.

11. No mileage will be allowed for learning road or being examined on foreign lines, except when a man is transferred from one division to another for the benefit of the company, in which case he will be paid one-half time for learning the road.

12. Men acting as witnesses or attending court under instructions from the company will be furnished transportation and paid their expenses and the following rates per day; this to include the time during which they are required to hold themselves in readiness for such service or are away from home: Engineers, \$3.80;

firemen, \$2.30; conductors, \$3.45; brakemen, \$2.30; switch foremen and helpers, the regular day rate in yard where employed; all other employees their regular wages. In the case of regularly assigned engine and trainmen the number of days allowed not to be less than the number of single trips lost, trainmen paid by the month to get their regular wages for time lost.

A similar rule will apply to operators, shop men, roundhouse men and car men sent out on the road to do work. They will be allowed a minimum of ten hours for each twenty-four hours away from home and reasonable expenses.

13. Overtime at the rate of twenty-five cents per hour will be allowed operators for all time on duty in excess of regular hours. Day men called at night will receive two hours' time as a minimum. If held more than one hour twenty-five cents per hour thereafter.

In computing overtime less than thirty minutes not to be counted; over thirty minutes, one hour.

14. Regular pay for operators called to work outside at wrecks or washouts, twenty-five cents per hour.

15. Regular hours for operators are: Where day and night men are employed, seven to seven.

Where but one man, twelve hours per day, unless hours of trains make it necessary to keep station open longer, but in no case more than fifteen hours.

Regular hours to be decided by superintendents, and operators to be notified.

16. Operators being transferred by order of the company will be paid for time necessary to make the change on basis of pay of position vacated.

17. Operators are allowed to act as agents or transfermen for the express company and compensation received for such service is in addition to, and not considered in fixing the compensation by the railway company.

18. Where station helpers or warehousemen are employed, the agent will require them to keep platform and station in order.

Where there are no station helpers, lampmen or section men, operators will have charge of switch lamps.

SENIORITY.

1. In the promotion of firemen to be engineers, brakemen to be conductors, and switchmen to be foremen, the oldest foreman, brakeman or switchman in point of service on the division, or in the yard, will have preference, merit and competency being equal. This will not prevent the hiring of experienced men for these positions should the service demand it, preference being given to those already employed as firemen, brakemen or switchmen.

2. In the choice of runs the enginemen or trainmen on that division who has been longest in service in this capacity will have preference, provided he is competent.

Vacancies in regular runs will be bulletined and remain open for fifteen days.

3. A man assigned to a run will have no claim on any other run unless there is a vacancy or a new run put on.

When a run is taken off, the men assigned thereto will take their positions according to seniority.

4. On the Southwest Division, freight trainmen east of Des Moines will have no rights in freight service west of Des Moines, and vice versa.

5. Preference will be given to operators laid off on account of decrease of business when force is increased, if immediately available.

6. Road men will take rank from date they are regularly assigned to road service.

If, in assignment of firemen promoted to be engineers or brakemen promoted to be conductors, a senior man is assigned to road service behind a junior man, through no fault of his own, he will take date ahead of such junior man.

7. The oldest engineer in yard service will have preference to road service over firemen promoted, except that enginemen voluntarily running switch engine for one year or more will have no rights to road service. Road men in yard serv-

ice of their own choice or who fail to return to road service when called on, for felt their rights in road service after one year.

Engineers taking the position of firemen of their own choice do not retain their rights as firemen.

8. A fireman promoted to engineer and assigned to yard service, desiring to enter road service, must so signify and take his place in road service at first opportunity, or forfeit his rights to road service.

The oldest foreman in road service will have preference as hostler, in case of a vacancy.

9. When road crews do not make 2,800 miles per month, the men most recently employed or promoted will be set back firing, braking or on the extra list as the case may be.

10. Men accepting positions outside their regular line of promotion may retain their former seniority one year. Promotion in the mechanical department will be considered the regular line of promotion for engineers.

11. Switchmen and passenger brakemen have no rights in freight service.

12. Men leaving the service voluntarily who are afterward re-employed rank as new men.

Men leaving the company's service or remaining away on leave of absence more than three months, except on account of sickness, lose all seniority rights.

13. A temporary vacancy in passenger service of more than ten days will be filled by the senior freight man; less than ten days by the first pool man out that is competent.

GENERAL REGULATIONS.

1. With trains of over thirty cars, exclusive of caboose, the practice of double-heading will be discontinued, except in case of storms or engine failure, or to avoid running engines light in moving them to or from shops, or from one part of the road to another, in which case they will not be used to increase the tonnage of the train beyond the rating of the heaviest engine. This rule will not apply to helping engines in following helper districts: Between St. Paul and Hampton, between Dennison and Kenyon, between Dyersville and Graf, between Galena Junction and Stockton, between Valaria and Melbourne, between Conger and Des Moines, between Shannon and Barney, between St. Joseph and Cawood.

2. Such runs as may be designated by the superintendent will have regular crews assigned them.

Enginemen and trainmen, except on the extra list, not assigned to regular runs, will run first in, first out, on their respective divisions or districts; a man relieved after only five hours' work being considered first out.

A similar rule shall apply to men on extra list.

3. In case a train crew is to be deadheaded, the second pool crew on the list will deadhead and on arrival will stand out ahead of the crew which brings in their caboose.

If first crew out is an assigned crew the first pool crew will deadhead.

4. Train and enginemen will not be called on to do switching where switch engines are employed, except in case of necessity.

Regular road enginemen or trainmen shall not be called for switching service when extra men are available. Regular or extra enginemen or trainmen making three consecutive days in yard service will be put at the bottom of the list; making less than three days they will stand first out.

5. A sufficient number of men will be kept on the regular list to take care of the business and allow necessary rest at terminal.

Firemen and brakemen will be assigned with engineers and conductors on the regular list.

A sufficient number of men will be kept on the extra list to fill the places of men who may lay off, but there will be no assignment of firemen and brakemen, engineers and conductors on the extra list. Extra men will be run first in, first out, as far as practicable. A regular man laying off will not go out again until the extra man who took his place returns.

6. In case of a shortage of men on one part of the road, and a surplus on another, the surplus men will be transferred temporarily to avoid hiring new men, and will lose no seniority rights thereby.

7. Enginemen assigned to regular runs will go on such runs regardless of engines furnished.

8. Foremen will be required to do all cleaning and scrubbing inside cab and on boiler heads of all engines.

They will be required to wipe all engines to which they are regularly assigned in all service, above running boards.

They will be required to scrub jackets, domes and outside of cabs of all engines to which they are regularly assigned, except classes 180, 200, 220, 300, 900.

They will not be required to paint or black smoke box or stacks on any engines.

9. Where callers are employed men who live within calling district will be called not less than one hour and a half before leaving time of train; except at Des Moines, where the time will be two hours. The caller's book will show the leaving time of train and the man called will sign his name and the time at which he is called. This will not apply to men assigned to regular passenger trains, except at Oelwein, Hayfield, Dubuque and Des Moines.

10. Men who are sick or unable from any cause to perform service should send notice in ample time to avoid being called.

Men arriving at terminals requiring rest will so report upon register book upon arrival. Ten hours off duty will be considered sufficient.

11. With permission of train dispatcher, trains may lay up for rest at intermediate stations 16 hours' continuous service will entitle a man to 8 hours' actual rest.

When trains are "tied up" by the dispatcher it will be at stations where there are accommodations, and if possible where an engine watchman can be furnished, and will not be "tied up" for less than 8 hours.

12. When practicable a stop for meals will be made when a train has been on the road 8 hours or more. This does not apply to time freight or stock trains whose schedule is 12 hours or less. Operators will transmit messages notifying eating houses that trains will stop for meals. If practicable yard crews will have one hour for meals between 11:45 and 1:15 noon or night, otherwise they will be paid for dinner hour and be allowed 30 minutes for lunch as near regular dinner hour as possible and no deduction made.

13. At shops and roundhouses not more than one regular apprentice will be employed for each trade represented, with the addition of one apprentice for every five journeymen employed, this rule not to affect apprentices already employed, or "special" or student apprentices who are not learning the trade. Regular apprentices will serve four years and will be given a certificate of service upon the proper completion of their apprenticeship.

14. Telegraph operators, either exclusive, or agent and operator, or towerman and operator combined, are considered as operators.

15. No action of a disciplinary nature will be taken except for an infraction of the rules of the company, the responsibility for which has been established by full and fair investigation, at which the employe interested will be present, accompanied, if he so desires, by another employe in same service.

If investigation shows employe blameless he will be paid for time lost.

If employe considers action taken unjust he will have right of appeal.

Investigations will be held within 5 days, if possible. If not, as soon thereafter as can be arranged.

TRANSPORTATION OF EMPLOYES' PERSONAL AND HOUSEHOLD EFFECTS.

1. The granting of free transportation or reduced rates to employes for their personal or household effects will be in accordance with the following rules:

2. Employes moved from one station to another for the benefit of the service, and who gain no substantial promotion in pay by such move—free.

3. Employees in train service whose runs are changed in such a manner that they are unable to reside at the terminal where they formerly resided—free.

4. New employees, who desire to make their residence at some station on this company's line—free.

5. Employees who have been in the service one year and longer, who desire to change their residence as a matter of personal convenience or preference—half rates.

6. In all other instances—full tariff rates.

7. The above rules do not apply to coal, wood, animals, furniture, groceries, etc., which employees may purchase at some other point and ship to the station where they are residing.

8. Requests for free transportation or reduced rates as above should be forwarded through the proper offices, who, if they approve, will refer same to the general freight agent for action.

Approved:

G. A. Goodrell, General Superintendent.

Samuel C. Stickney, General Manager.

ENGINEERS, FIREMEN, CONDUCTORS AND TRAINMEN—WABASH RAILROAD.

Yard engineers are advanced from \$2.50 to \$2.75 a day; yard firemen from \$1.50 to \$1.65.

All passenger engineers on through runs are increased from \$3.40 to \$3.50 per hundred miles. Engineers on the large engines are advanced from \$3.40 to \$3.65 per hundred miles.

Passenger firemen on small engines are raised from \$1.90 to \$2.00; on the large engines to \$2.10.

Freight engineers on through runs are advanced from \$3.85 to \$4.10 per hundred miles on the small engines and from \$4.00 to \$4.25 on the large ones.

Freight firemen are raised from \$2.20 to \$2.30 per hundred miles on the small and from \$2.30 to \$2.50 on the large engines.

In the freight service conductors are raised 15 cents a hundred miles on the through runs, or from \$3.00 to \$3.15. Brakemen are raised from \$2.00 to \$2.10.

In the passenger service conductors are advanced \$5 per month. Brakemen formerly got 50 per cent of the conductor's wages and under the new schedule will get 53 per cent.

EMPLOYERS STATISTICAL REPORTS.

This chapter is presented in three tables; the first alphabetically arranged by industries and counties, the second table is a summary of the whole and includes reports from ninety-one counties in the state, the third table is a comparative summary of the state, showing the percentage of increase or decrease from 1896 to 1902, and for each biennial period since 1896 where the material which had been collected would permit of a comparison.

It was not possible to include any date previous to the year 1896 and still present a summary for each biennial period, because the first inquiry of this character made in the state was only presented September, 1897, in the seventh report covering the years 1895 and 1896 by Commissioner W. E. O'Brien.

It will be seen at a glance that this chapter is but a partial report of the business in Iowa industries and mercantile establishments as none but employers of five or more persons are required by law to report.

Realizing the necessity of making the employers' statistical report as complete and encouraging as possible and at the same time reduce to the minimum the demands upon employers it was decided not to ask the employers to report each year but every alternate year with the hope that they would give a more complete report when requested.

On account of the unprecedented method of including a specific blank form in section 2474 of the Code governing the Bureau and in view of the fact that the Twenty-ninth General Assembly, amended sections 2470 and 2472 in addition to the enactment of chapter 10, sections 4999—a, b, c and d, in the Supplement to the Code which added to the duties of the Commissioner without in any way amending the aforesaid blank so as to secure the information

required raised a doubt whether it would be permissible to add to or take from the statutory form of the blank. The attorney-general was therefore requested to advise in the premises, the reply to which is appended, and which clearly states that the blank incorporated at the end of section 2474 is not contemplated to be rigid, but that the Commissioner must be the sole judge of the form of blanks to be furnished employers for the purpose of ascertaining the information incumbent on him to collect.

OPINION OF ATTORNEY-GENERAL.

SIR—Your request for an opinion from this office as to whether it is mandatory upon you to adhere strictly to the blank form provided in section 2474 of the Code has been referred to me to answer.

The first sentence in the above section makes it the duty of every owner, proprietor of every factory, mill, work-shop, etc., or any other establishment where labor is employed as herein provided, to make to the bureau, upon blanks furnished by said bureau, such reports and returns, as said bureau may require for the purpose of compiling such labor statistics as are contemplated in this chapter, and it further provides that such reports shall be made within sixty days from receipt of the blank furnished by the commissioner.

From this sentence, it will be seen that the blanks to be furnished such persons are to be such as the commissioner may require for the purpose of compiling labor statistics, as are contemplated in chapter 8 of Title XII of the Code. This sentence of the section does not require the commissioner to furnish the blank form incorporated at the end of the above section. The commissioner must be the sole judge of the form of the blank to be furnished such persons for the purpose of ascertaining the information desired to enable him to compile the labor statistics contemplated in the above chapter.

The next sentence in the section provides that any person mentioned within this section, who neglects or refuses to make to the commissioner such report, as may be required by the following blank, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished.

This sentence would seem to indicate that the penalty was not attached for a neglect or a refusal to furnish to the commissioner such reports or returns as are required by the blank, which is made a part of section 2474.

There seems to be nothing in the above section which limits the commissioner to the blank form incorporated in this section.

It is my opinion that it was the intent of the legislature not to limit the commissioner to the blank form incorporated in the above section but to leave it a matter within his discretion as to whether this blank included all questions necessary to secure the information desired to enable the commissioner to perform all of the duties imposed upon him relating to the compiling of labor statistics provided for in chapter 8, title 12, of the Code.

I am further convinced that such was the intention of the legislature for at a subsequent session thereof 2470 and 2472 were amended so as to require the commissioner to gain further information relative to labor statistics than was required of him at the time section 2474 and the blank therein contained were adopted.

I am, therefore, clearly of the opinion that you have the right to add to the blank form above mentioned all questions which you deem necessary to gain such information as you were required to do under sections 2470 and 2472 as amended.

Respectfully submitted,

January 2, 1903.

CHARLES A. VAN VLECK, *Assistant Attorney-General.*

To EDWARD D. BRIGHAM, *Commissioner Bureau of Labor Statistics:*

In accordance with the above instructions from the attorney-general the following circular letter and blank was prepared and distributed to the employes of the state:

STATE OF IOWA, BUREAU OF LABOR STATISTICS.

EMPLOYERS' STATISTICAL BLANK.

DES MOINES, IOWA.

To the Employers of Iowa,—Inquiries contained in this blank are in compliance with the law directing the Commissioner of Labor "to collect statistical details relating to all departments of labor in the state, especially in its relation to the commercial and sanitary conditions where labor is employed, the means of escape from, and the protection of life and health in factories, the employment of children, the number of hours of labor exacted from them and from women."

"He shall as fully as possible collect such information and reliable reports from each county in the state, showing the amount and condition of the mechanical, manufacturing and commercial interests of the state, from establishments where five or more persons are employed."

An extract from the law setting forth the requirement is included so you may be thoroughly advised and act accordingly.

This report should cover your last fiscal year of 1902 and must be returned to this office within sixty days.

Yours very respectfully,

EDWARD D. BRIGHAM,
Commissioner of Labor for Iowa.

GENERAL INQUIRIES

TO ALL EMPLOYERS OF FIVE OR MORE PERSONS IN IOWA.

Answer such questions only as pertain to your business and establishment.

1. Name of firm or corporation.....
2. Located at.....
- County. 3. Kind of business transacted.....
4. Number of employes during last fiscal year.....
- No. adult males.....
- No. adult females.....
- No. children under sixteen years.....
5. Number of hours worked per day by men.....
- By women.....
- By children.....
6. Total amount of wages paid adult males during the last fiscal year \$.....
7. Total amount of wages paid adult females during last fiscal year \$.....
8. Total amount of wages paid children under sixteen during last fiscal year \$.....
9. Any actual increase or reduction in the rate of wages during last fiscal year \$.....
- If so, what amount or per cent of increase?.....
- Or what amount or per cent of reduction?.....
- How many employes were affected?.....
10. Cause of increase or reduction.....
11. Any increase or reduction of business during last fiscal year?.....
- Increase \$.....
- Decrease \$.....
12. Number of weeks during last fiscal year business was run on full time with full force?.....
13. Number of weeks during last fiscal year business was run on short time with reduced force?.....
14. Number of weeks during last fiscal year business was suspended?.....
15. How many strikes or lockouts since December 31, 1900?.....

MEANS OF ENTRANCE AND EXITS TO BUILDINGS.

16. Number of stories in building?.....
- Brick or frame?.....
17. Number of stairways, inside?.....
- Outside?.....
18. Are fire escapes provided, according to law, enacted in 1902?.....
19. Number of elevators?.....
- How protected?.....
20. Number of hoists?.....
- How protected?.....
21. Are employes locked in during working hours?.....
22. Are doors hinged to swing inward or outward?.....

VENTILATION AND SANITATION.

23. How are work rooms and buildings ventilated?.....
24. Are suitable water or earth closets provided?.....
25. Description of closets.....
- Condition as to cleanliness.....
26. Are closets for females separate and apart from the males?.....
- Are they properly screened?.....

SAFEGUARDS TO MACHINERY AND ACCIDENTS.

27. Are loose pulleys and belt shifters used?.....
28. Are vats pans, saws, cogs, set screws, fly wheels and all geared machinery properly guarded?.....
29. Are emery wheels, tumbling barrels and dust producing machinery provided with suction fans or dust blowers?.....

30. If steam boilers are used, by whom are they inspected?.....
 How often?.....31. Are children under sixteen years of age oper-
 ating or assisting to operate dangerous machinery of any kind?.....
 32. Are employees allowed to clean machinery while in motion?.....
 33. Are cautionary instructions posted or verbally given to employees
 operating machinery?.....34. Number of accidents since December
 31, 1900.....Nature of accidents.....Number killed.....
 Number injured.....

MANUFACTURES.

35. Total capital invested, including lands, buildings, tools and ma-
 chinery, \$.....36. Total cost of production for last fiscal year, in-
 cluding raw materials, freights, rents, taxes, miscellaneous expenses
 and salaries of officials, but do not include wages, \$.....37. Total
 value of product for last fiscal year, \$.....

State of Iowa,.....County, ss:

Subscribed and sworn to before me by.....this.....day of
190...

WITNESS my hand and official seal.

.....Notary Public.

DIRECTORY OF EMPLOYERS.

On account of the fact that no directory has ever been prepared in the state that includes every employer of five or more persons and the old directory's in the Bureau pertaining to such information needed a revision it was determined to exhaust every effort to secure the largest possible number of names of employers in the state that were known or believed to employ five people.

A directory of 4,000 employers was compiled and blanks sent to them for statistics relating to their business and the physical condition of the buildings and premises in and around which their labor is employed, satisfactory returns were received from 1,627 employers, 573 others acknowledged receipts of the blanks but who did not report for various reasons, such as, "out of business," "left the state," "sold to other parties," or those who employed less than five persons," the remaining 1,800 or forty-five per cent of the whole number of employers solicited have failed to respond or acknowledge in any manner although the second call was sent them.

That such a large proportion of employers in the state would wholly disregard an wholesome educational requirement of law that exhibits the comparative value of the growth of the business interests of the state is to be deplored.

To those employers who so cheerfully responded and by their actions displayed a ready willingness to exhibit their business development a full measure of appreciation is tendered.

INDUSTRIAL DEVELOPMENT.

No better evidence of industrial development in a community can be furnished than that collected from men in active business, a careful study of table No. 3 discloses the usually interesting modern features relative to the rapid increase in female and child labor and the increasing number of employes to an establishment; first we find that the number of establishments reporting decreased from 1,752 in 1896, to 1,625 in 1898, or 7.81 per cent, a further decrease followed in 1900 to 1,285, or 26.45 per cent, in 1902 reports were received from 1,627 or an increase of 26.61 per cent over 1900 and a decrease from 1896 of 7.13 per cent covering the six years.

The average number of employes reported (which includes men, women and children) for 1896 was 49,273; for 1898, 55,429; for 1900, 51,175; and for 1902, 62,299, or an increase of 12.49 per cent for the first period, a decrease of 8.31 per cent for the second, an increase of 21.75 per cent for the third, and an increase of 26.43 per cent for the whole period.

In 1896 the average number of employes to one establishment was 28; in 1898, 34; in 1900, 39; and in 1902, 38.

Female labor shows an increase between 1896 and 1898 of 26.74 per cent; between 1898 and 1900 a decrease of 5.30 per cent; between 1900 and 1902 an increase of 27.27 per cent, and in the whole period between 1896 and 1902 an increase of 52.77 per cent.

The average length of work day for females in the state is nine and one-half hours.

To those who regard the child labor problem with indifference an exhibit is shown that should at least cause a momentary pause to inquire whether if at the present rate of increase their own immediate personal interest will be benefited or retarded.

In 1896 there was reported 687 children employed; in 1898, 623; in 1902, 2,630, or an increase of 322.15 per cent in the four

year period. To those who view this increase in the employment of children as a sign of retrogression and a menace to the future interests of the people of Iowa it will be an indication that some immediate steps should be taken to provide legal restraints if moral ones will not avail to protect the greatest heritage the state possesses, viz: the children.

The average length of work day for children in the state is nine and one-half hours.

WAGES.

The total wage fund reported for 1902 gives cause for gratification and demonstrates one thing at least, viz: steadier employment.

In 1896, 49,273 persons including men, women and children received a total of \$17,369,622 as wages or a nominal annual average of \$352.71. In 1898, 55,429 persons received \$19,623,892 or a nominal annual average of \$354.03, an increase of .37 per cent over 1896.

In 1900, 51,175 persons received \$21,145,961 or a nominal annual average of \$413.20, an increase of 16.71 per cent over 1898. In 1902, 62,299 persons (less 996 for whom no wage account was reported, see foot note "d" in summary table No. 3) received \$26,660,004 (less \$5,500 for whom no regular employees were reported, see foot note "d" summary table No. 3), or a nominal annual average of \$434.80 an increase of 5.22 per cent over 1900 or in the period of six years an increase of 23.27 per cent computed on the same basis.

The nominal annual average received by adult males in 1902 was \$501.91, it will be observed in table No. 3 by foot note "e" that the wage account for 1,329 male employees was not reported separately, this number was, therefore, deducted from the total number of adult males (47,857) in basing the average.

Adult female employees received a nominal annual average wage of \$241.40; see foot note "f" in table No. 3.

Children under 16 received a nominal average wage of \$122.85; see foot note "i" in table No. 3

In table No. 2 it will be seen that 421 employers report an increase of wages for 11,490 employees, or an average for the state of 10.34 per cent.

INCREASE IN VOLUME OF BUSINESS.

The returns from 1,627 establishments reporting show an aggregate increase in business for 1902 amounting to \$10,740,000, this item was not reported by every employer, however, so it is not possible to report what the total increase in business among the employers has been, but the item quoted is cause for great gratification as to the solidity of the business institutions.

The number of strikes reported by employers for the year was sixty.

COMMENT ON AVERAGES.

It will be observed that the term "nominal annual average" is quoted at intervals for which a word of explanation is due, the expression has been used advisedly because it has become impossible to quote the simple term "average" and allow it to be assumed that it would convey the meaning of a true average.

The expression as applied to the term average is vitiated if all the accompanying details are not at hand to compute it correctly. If all the occupations could be separated and the wage accounts for each secured with the actual working time each was engaged during the year, then the average obtained would be indicative, but when variation, however slight occurs either with regard to the number employed, or the length of service, or any change in the amount of the wage rate each receives, then the term average is liable to be misleading and incorrect.

The nominal averages quoted in this respect are true as related to the wage expense account of the business done but do not apply as the true average wage received by the employes, for instance, over 2,000 men are employed in the brickyards of the state, the season runs about 26 weeks or half the year, the wages paid are about \$1.65 per day, a man so employed would receive \$257.40 for the season's work, while this amount would be the average expense to the employer for one man's services on the basis mentioned, it cannot be supposed it would be the total annual wage received by such an employe as other employment would be sought and secured for at least a part of the remainder of the season.

This illustration might be multiplied at length including other season employments such as ice cutting, coal mining, canning, saw mills, button blank cutting, etc.; all of these industries with the

employees enter the table along with industries that run almost uninterruptedly through the year, such as printing, iron molding, plumbing, mercantile establishments, etc.; in all of which the annual service would be more prolonged and the annual wages received as a consequence much higher.

These factors coming together as they do, and the limited means in the bureau insufficient to counteract it, this explanation is considered necessary because the evidence from the wage earners and trade union tables in other chapters of this report are all overwhelmingly in support of the fact that \$501.91 is altogether far too low a figure to place as the true average earnings of adult male employees of the state of Iowa.

Plans are now being developed by the United States Census Bureau with which the United States Department of Commerce and Labor will co-operate, and at the last convention of the Association of Officials of the several state Bureaus of Labor Statistics, a resolution was unanimously adopted to co-operate with the national departments, for the main purpose of collecting industrial statistics uniformly and coordinately in all the states, by this means being enabled to produce details and conclusions that will be positive, complete and free from misconception.

This problem was very clearly recognized and expressed by Director of the United States Census, Hon. S. N. D. North, in his concise address before the annual convention of Bureau Chiefs held at Washington, D. C., April 28, 1903, when he said:

"More difficult still is the question of labor and wages. What is the true method of computing the average number of employees in any given industry? What scheme can be devised to determine what are the average earnings of labor? We have as yet found none in which we have confidence, we are appalled by a problem in which we must deal with the day rate, the weekly rate, the piece price rate, in which every separate occupation in every industry represents a different wage in which the degree of non-employment varies constantly, in which a thousand conflicting factors enter to disturb and invalidate the statistical conclusion."

STATISTICAL REPORT

Of the Employers

ADAMS

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures	1	5	.....	.....	10	.....	.....
2	Coal mining	8	80	.....	.....	8	.....	.....
3	Hotels	1	4	8	.....	12	12	.....
	Total	5	89	8	.....	.....	.....	.....

ALLAMAKEE

1	Button blank manufactures.....	8	108	80	.....	10	10	.....
2	Dry goods and general merchandise.	1	6	8	.....	10	10	.....
3	Stone quarries	1	42	.....	.....	10	.....	.....
4	Wagon manufactures	1	15	.....	.....	10	.....	.....
5	Wagon and implement dealers.....	1	5	.....	.....	10	.....	.....
	Total	7	176	88	.....	.....	.....	.....

APPANOOSE

1	Brick and tile manufactures.....	1	21	.....	.....	9	.....	.....
2	Coal mining	10	624	.....	5	8	.....	8
3	Coal dealer, retail	1	13	.....	.....	8	.....	.....
4	Electric power and light supply.....	1	10	1	.....	12	8	.....
5	Hotels.....	1	4	8	.....	12	12	.....
6	Laundries	1	5	5	.....	10	10	.....
7	Telephone exchange, local	1	4	6	.....	10	10	.....
8	Wholesale groceries	1	1	2	.....	10	9	.....
	Total	17	686	22	5	.....	.....	.....

a Cause, "agreement with union,"

b Cause, "scarcity of miners."

c Cause,

AUDUBON

1	Brick and tile manufactures	1	12	.....	2	10	.....	10
2	Building and contracting	1	5	.....	.....	10	.....	.....
	Total	2	17	.....	2	.....	.....	.....

BENTON

1	Brick and tile manufactures	4	36	.....	.....	10	.....	.....
2	Button manufactures, pearl	1	45	141	4	10	10	10
3	Canning, vegetables	2	500	400	100	12	12	12
4	Dry goods and general merchandise.	1	5	8	.....	12	12	.....
5	Printing and publishing	2	11	4	.....	10	10	.....
6	Steel metal manufactures	1	7	1	.....	10	8	.....
	Total	11	604	549	104	.....	.....	.....

—TABLE No. 1.

of Iowa for 1902.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902 Increase, Inc.; Decrease, Dec.			Average number of weeks in operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full time.	Short time, reduced force.	Suspended.	
\$ 750	.....	.....	\$ 750	.....	.....	.....	24	.....	28	1
6,000	.....	.....	6,000	.....	.....	.....	20	10	22	2
970	\$ 540	.....	1,510	.....	.....	.....	52	.....	.....	3
\$ 7,720	\$ 540	.....	\$ 8,260	.....	.....	.....	.....	.....	.....	.....

COUNTY.

\$ 40,100	\$ 4,000	.....	\$ 44,100	Inc.	10 00	112	42	8	2	1
2,520	780	.....	3,300	Inc.	5.00	9	52	.....	.....	2
3,476	.....	.....	3,476	.....	.....	.....	20	14	18	3
4,253	.....	.....	4,253	.....	.....	.....	40	12	.....	4
2,700	.....	.....	2,700	.....	.....	.....	36	16	.....	5
\$ 53,049	\$ 4,780	.....	\$ 57,829	4	.....	121	.....	.....	.....	.....

COUNTY.

\$ 7,600	.....	.....	7,600	a Inc.	a 12.00	a 21	32	.....	20	1
361,109	.....	\$ 700	361,809	b Inc.	b 10.00	b 30	32	2	18	2
9,000	.....	.....	9,000	.....	.....	.....	52	.....	.....	3
4,900	\$ 860	.....	5,160	.....	.....	.....	52	.....	.....	4
1,116	1,829	.....	3,045	.....	.....	.....	52	.....	.....	5
2,886	1,040	.....	3,926	c Inc.	c 5.00	c 10	52	.....	.....	6
2,180	1,080	.....	3,260	.....	.....	.....	52	.....	.....	7
6,700	840	.....	7,540	c Inc.	c 10.00	c 12	52	.....	.....	8
\$ 895,871	\$ 5,249	\$ 700	\$ 401,820	4	.....	73	.....	.....	.....	.....

"long service and more work."

COUNTY.

2,000	.....	\$ 175	\$ 2,175	.....	.....	.....	26	.....	26	1
468	.....	.....	468	.....	.....	.....	24	26	2	2
\$ 2,468	.....	\$ 175	\$ 2,643	.....	.....	.....	.....	.....	.....	.....

COUNTY.

\$ 6,850	.....	.....	\$ 6,850	Inc.	16.50	12	12	14	26	1
a	a	a	a 34,000	.....	.....	.....	52	.....	.....	2
26,928	12,228	2,644	41,800	.....	.....	.....	6	.....	46	3
2,520	850	.....	3,370	.....	.....	.....	52	.....	.....	4
4,700	1,400	.....	6,100	Inc.	20.00	7	52	.....	.....	5
2,524	200	.....	2,524	Inc.	5.00	7	10	2	40	6
\$ 43,822	\$ 14,678	\$ 2,644	\$ 91,644	8	.....	26	.....	.....	.....	.....

a Separate wage accounts for men, women and children not reported.

EMPLOYERS STATISTICAL REPORT

BLACK HAWK

Mar- ginal num- ber.	Industry or Kind of Business.	Num- ber estab- lish- ments report- ing.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult fe- males.	Child- ren under 16	Adult males.	Adult fe- males.	Child- ren under 16
1	Boiler manufacturing and repairing	1	6	.....	.....	10	.....	.....
2	Bottling works	1	6	1	.....	10	10	.....
3	Brick manufactures	2	22	.....	.....	10	.....	.....
4	Broom manufactures	1	8	.....	2	10	.....	10
5	Candy manufactures	1	15	16	8	10	10	10
6	Canning, vegetables	2	220	90	70	12	12	12
7	On ket manufactures	1	14	1	.....	10	10	.....
8	Cigar manufactures	2	28	39	.....	10	10	.....
9	Coffee and spice preparations	1	11	8	.....	10	9	.....
10	Creamery supply manufactures	2	68	5	.....	10	9	.....
11	Dry goods, general merc andise	2	13	35	.....	10	10	.....
12	Gas engine manufactures	1	112	8	1	10	10	10
13	Gas, light and heat, companies	1	20	.....	.....	12	.....	.....
14	Gate manufactures	1	6	1	.....	10	8	.....
15	Glove and mitten manufactures	1	8	27	.....	10	9	.....
16	Hardware manufactures	2	52	4	.....	10	9	.....
17	Hardware, heating and plumbing	1	11	2	.....	10	8	.....
18	Harness and saddlery manufactures	2	41	2	.....	10	9	.....
19	Hotels and boarding houses	4	10	29	2	12	12	12
20	Laundry	1	6	15	.....	10	10	.....
21	Mattress manufactures	1	8	.....	.....	10	10	.....
22	Milling, grain and cereals	2	108	1	.....	10	5	.....
23	Packing products, meats, etc	1	49	2	.....	10	10	.....
24	Printing and publishing	2	28	8	25	9	8	2
25	Sash, doors, fixtures and refrigera- tor manufactures	4	254	5	5	10	9	10
26	Shirts, waists and overall mfrs.	8	16	86	.....	10	9	.....
27	Steel pipes, tanks and cornice mfrs.	2	25	1	.....	10	10	.....
28	Street car transportation	1	108	2	.....	10	9	.....
29	Tailoring, merchant	1	7	.....	.....	10	.....	.....
30	Telephone exchange local	1	5	20	.....	10	9	.....
31	Water supply, stations	2	11	1	.....	10	8	.....
32	Well drilling machine manufactures	1	50	.....	.....	10	.....	.....
33	Wholesale and retail drugs	2	80	2	.....	10	8	.....
34	Wholesale grocers	1	37	2	.....	10	9	.....
35	Wholesale hardware	1	20	.....	.....	10	.....	.....
Total		57	1,422	390	108	.....	.....	.....

a One establishment only; causes, scarcity of help and increased cost of living.

they organized. d Cause of increase, "strike."

e One establishment is new, oper

BOONE

1	Brick and tile manufactures	8	81	.....	.....	9	.....	.....
2	Cigar manufactures	1	6	1	.....	8	8	.....
3	Clothing and tailoring	2	15	1	.....	10	10	.....
4	Dry goods, carpets and millinery	1	5	12	.....	10	9	.....
5	Gas lighting supply	1	12	.....	.....	9	.....	.....
6	Glove manufactures	1	2	8	.....	10	10	.....
7	Harness and saddlery manufactures	1	81	2	.....	10	10	.....
8	Hardware and implements (retail)	1	4	2	.....	10	9	.....
9	Hotels	1	2	6	.....	10	10	.....
10	Laundry	1	4	12	.....	9	9	.....
11	Milling, grain and cereals	2	26	14	.....	10	10	.....
12	Printing and publishing	2	7	4	2	9	9	9
13	Street transportation and lighting	1	17	1	.....	12	10	.....
Total		18	162	58	2	.....	.....	.....

a Two establishments; cause, general prosperity and organization of men.

c Separate

—TABLE No. 1—CONTINUED.
COUNTY.

Total wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employees	Full force full time.	Short time, reduced force.	Suspended.	
\$ 4,680			\$ 4,680				52			1
3,985			3,985				52			2
6,943	\$ 280		6,943	a Inc.	a 25.00	a 14	26			3
4,340			4,615				26	26		4
7,800	3,120		11,123				36		16	5
19,755	2,440	1,150	23,345	a Inc.	a 10.00	a 20	4			6
35,230	3,312		38,542	b Inc.	b 5.00	b 14	52			7
21,504	18,828		40,330				52			8
9,840	780		10,620				52			9
34,976	2,720		42,696				46	6		10
10,100	12,000		22,000				52			11
68,612	1,860	234	70,266				52			12
13,120			13,120	a Inc.	a 10.00	a 4	c 52			13
5,000	250		5,250				52			14
1,900	8,000		9,900				52			15
20,608	560		21,453	a Inc.	a 10.00	a 30	26	26		16
8,000	600		8,600	d Inc.	d 10.00	d 8	40	12		17
81,373	800		82,173				48	4		18
2,652	4,735	240	7,627	a Inc.	a 15.00	a 12	52			19
3,538	8,900		7,438				52			20
3,980	540		8,900				52			21
55,000	800		55,800	a Inc.	a 5.00	a 16	40	12		22
18,595	700		19,295				52			23
20,200	924	950	22,074	a Inc.		a 20	52			24
141,490	1,877	920	144,287	a Inc.	a 5.00	a 16	45	7		25
7,989	19,982		27,951				e 52			26
14,420	470		14,890				52			27
68,855	880		64,735				12	40		28
4,900			4,900	f Inc.	f 10.00	f 6	52			29
2,500	4,800		7,300				52			30
6,792	900		7,692	a Inc.	a 5.00	a 7	52			31
24,000			24,000	Inc.	10.00	20	52			32
22,600	675		23,275	g Inc.	g 10.00	g 30	52			33
80,540	1,380		81,900				52			34
12,644			12,644	g Inc.	g 5.00	g 20	52			35
\$ 714,179	\$ 98,811	\$ 4,077	\$ 812,067	15		237				

b Cause, hard to get right class of help.

ated 12 weeks.

f Demand.

c Lock out of men in one establishment, because

g Cause, increased business and proficiency of employees.

COUNTY.

\$ 4,056			\$ 4,056	a Inc.	a 35.00	a 24	24			1
2,500	\$ 812		2,812				52			2
8,105	800		8,405	Inc.	10.00	15	52			3
8,120	8,790		6,910	Inc.		4	35	17		4
6,180			6,180	Inc.		10	52			5
1,800	700		2,500				40	12		6
23,068	800		23,868				f 2			7
2,920	840		3,760				52			8
885	2,840		3,225				52			9
2,080	8,011		5,091	Inc.	10.00	16	52			10
c	c		13,500				40	12		11
4,100	1,168	825	5,998	b Inc.	b 10.00	11	52			12
10,000	600		10,600				52			13
\$ 68,809	\$ 13,861	\$ 825	\$ 98,495	7		80				

wage account for males and females not reported.

b Offices unionized.

EMPLOYERS STATISTICAL REPORT—

BREMER

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Butter tub manufactures	1	16	.....	.....	10	.....	.....
2	Condensed milk preparations	1	25	22	.....	10	9	.....
3	Furniture, fixtures, mill work, etc.	1	18	.....	.....	10	.....	.....
	Total	3	59	22	.....	.....	.....	.....

BUCHANAN

1	Creamery and produce	1	55	.....	.....	10	.....	.....
2	Milling and grain	1	4	.....	.....	12	.....	.....
3	Street railway and lighting	1	8	.....	.....	10	.....	.....
4	Wholesale grocery	1	8	1	.....	10	10	.....
	Total	4	70	1	.....	.....	.....	.....

a Cause of increase, "greater efficiency."

BUENA VISTA

1	Brick and tile manufactures	1	6	.....	.....	10	.....	.....
2	Butter tub and tank manufacturing	1	12	.....	.....	10	.....	.....
3	General merchandise	2	18	4	.....	12	12	.....
	Total	4	31	4	.....	.....	.....	.....

BUTLER

1	Milling, grain and cereals	2	8	.....	.....	10	.....	.....
	Total	3	8	.....	.....	.....	.....	.....

CARROLL

1	Brick manufactures	1	9	.....	.....	10	.....	.....
2	Calf muzzle manufactures	1	18	.....	.....	10	.....	.....
3	Hotel	1	1	6	.....	14	13	.....
	Total	3	28	6	.....	.....	.....	.....

CASS

1	Brick manufactures	1	7	.....	1	10	.....	10
2	Canning vegetables	1	250	80	20	12	12	12
3	Dry goods and general merchandise	2	13	10	.....	11	10	.....
4	Milling, grain and cereals	1	8	.....	.....	12	.....	.....
5	Planing mill and contracting	1	21	1	.....	10	9	.....
6	Printing and publishing	1	6	4	.....	10	10	.....
7	Water supply	1	8	.....	.....	12	.....	.....
	Total	8	308	95	21	.....	.....	.....

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For num-employees.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 5,780			\$ 5,780				40		12	1
12,232	\$ 6,896		19,128				52			1
8,680			8,590	Inc.	10.00	18	50	2		8
\$ 26,572	\$ 6,896		\$ 33,468	1		18				

COUNTY.

\$ 23,000			\$ 23,000	Inc	10.00	12	52			1
2,198			2,198				40			2
2,880			2,880				52			8
7,106	\$ 867		7,473				52			4
\$ 34,658	\$ 867		\$ 35,525	1		12				

COUNTY.

\$ 1,404			\$ 1,404				24			1
5,000			5,000				32	12	8	2
6,240	\$ 1,144		7,384	Inc.	10.00	8	52			8
\$ 12,644	\$ 1,144		\$ 13,788	1		8				

a Employees were worth more.

COUNTY.

\$ 1,900			\$ 1,900				48		4	1
\$ 1,900			\$ 1,900							

COUNTY.

\$ 2,700			\$ 2,700				25		27	1
4,808			4,808				20	30	2	2
480	\$ 1,900		1,680				52			8
\$ 7,488	\$ 1,200		\$ 8,688							

COUNTY.

\$ 2,168		\$ 31	\$ 2,194				26		26	1
17,000	\$ 6,000	1,500	24,500	Inc.	20.00	800	10	12	80	2
5,965	2,624		9,589				52			8
8,800			8,800				52			4
8,000	280		8,280				43	6	8	5
4,000	1,250		5,250				52			6
1,900			1,900				52			7
\$ 47,508	\$ 11,154	\$ 1,581	\$ 60,183	1		800				

a Cause of increase, "Compulsory to get help."

EMPLOYERS STATISTICAL REPORT

CEDAR

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employes for 1902.			Hours Worked Per Day by		
			Adult males	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Stone quarries.....	1	88	1	6	10	18	10
	Total	1	88	1	6			

CERRO GORDO

1	Bottlers, aerated waters.....	1	8			10		
2	Brick and tile manufactures.....	8	145			10		
3	Broom manufactures.....	1	5			10		
4	Building and contracting.....	1	89	1		10	9	
5	Cigar manufactures.....	2	28	6		10	10	
6	Grain, live stock and general mdse.	1	5			10		
7	Hotels.....	2	9	18		12	12	
8	Laundries.....	1	7	18		10	10	
9	Machine shop and foundry.....	1	10			10		
10	Packing, beef and pork.....	1	22			10		
11	Printing and publishing.....	1	10	8		9	9	
12	Telephone exchanges.....	2	45	15		10	8	
13	Wholesale butter and eggs.....	1	10			10		
14	Wholesale grocery.....	1	82	8		10	10	
	Total.....	19	414	64				

a Cause of increase, "prosperity, increased cost of living, etc."

b Cause of increase,

CHEROKEE

1	Brick and tile manufactures.....	1	20			10		
2	General merchandise.....	1	8	5		10	10	
3	Laundries.....	1	4	4		10	10	
	Total.....	3	27	9				

CHICKASAW

1	Tow manufactures (flax).....	1	8			10		
2	Water supply.....	1	8			10		
3	Woolen goods manufactures.....	1	2	7	1	10	10	10
	Total.....	3	18	7	1			

CLARKE

1	Electric light and power.....	1	4			12		
	Total.....	1	4					

CLAY

1	Bale press manufactures (hay).....	1	4			10		
2	Flax fibre manufactures.....	1	18			10		
3	General merchandise.....	1	6	4		10	9	
	Total.....	3	28	4				

—TABLE No. 1 —CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16	Total.	Inc. or Dec.	Average per cent.	For number employees.	Full for full time.	Short time, reduced force.	Suspended.	
\$ 88,068	\$ 600	\$ 1,080	\$ 89,738	.....	.....	.....	86	16	.....	1
\$ 88,068	\$ 600	\$ 1,080	\$ 89,738	.....	.....	.....	.....	.....	.....	.....

COUNTY.

\$ 1,768	.....	.....	\$ 1,768	Inc.	8.00	8	12	40	.....	1
82,986	.....	.....	82,986	aInc.	a 7.00	a 180	88	14	.....	2
850	.....	.....	850	bInc.	b 4.00	b 5	35	.....	17	3
55,105	\$ 450	.....	55,555	cInc.	c 12.50	c 89	.....	.....	.....	4
16,000	1,660	.....	17,660	.....	.....	.....	48	.....	4	5
8,240	.....	.....	8,240	.....	.....	.....	52	.....	.....	6
2,900	3,700	.....	6,600	.....	.....	.....	52	.....	.....	7
4,212	4,386	.....	8,598	.....	.....	.....	52	.....	.....	8
5,157	.....	.....	5,157	.....	.....	.....	52	.....	.....	9
14,738	.....	.....	14,738	.....	.....	.....	52	.....	.....	10
6,000	1,450	.....	7,450	dInc.	d 20.00	d 18	52	.....	.....	11
15,400	8,600	.....	24,000	.....	.....	.....	52	.....	.....	12
5,450	.....	.....	5,450	.....	.....	.....	52	.....	.....	13
28,250	2,350	.....	30,600	.....	.....	.....	52	.....	.....	14
\$ 287,086	\$ 17,586	.....	\$ 304,672	.....	.....	240	.....	.....	.....	.....

"Joined the union."

c "Labor hard to get."

d "Better service from employees."

COUNTY.

\$ 6,868	.....	.....	\$ 6,868	Inc.	5.00	8	30	10	12	1
1,800	\$ 2,000	.....	3,800	.....	.....	.....	52	.....	.....	2
2,000	1,000	.....	3,000	.....	.....	.....	52	.....	.....	3
\$ 10,668	\$ 8,000	.....	\$ 18,668	1	.....	8	.....	.....	.....	.....

COUNTY.

\$ 2,000	.....	.....	\$ 2,000	.....	.....	.....	20	20	12	1
870	.....	.....	870	.....	.....	.....	52	.....	.....	2
870	\$ 1,100	\$.96	2,066	.....	.....	.....	40	.....	12	3
\$ 3,740	\$ 1,100	\$.96	\$ 4,936	.....	.....	.....	.....	.....	.....	.....

COUNTY.

\$ 1,640	.....	.....	\$ 1,640	Inc.	10.00	1	52	.....	.....	1
\$ 1,640	.....	.....	\$ 1,640	1	.....	1	.....	.....	.....	.....

COUNTY.

\$ 1,800	.....	.....	\$ 1,800	Inc.	20.00	8	45	.....	7	1
8,000	.....	.....	8,000	.....	.....	.....	82	.....	2	2
2,050	\$ 1,650	.....	3,700	.....	.....	.....	52	.....	.....	3
\$ 6,850	\$ 1,650	.....	\$ 8,500	1	.....	8	.....	.....	.....	.....

EMPLOYERS STATISTICAL REPORT—

CLAYTON

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures	1	12			10		
2	Button, blanks manufactures (pearl)	1	100			10		
3	Butter and cheese manufactures	1	4			10		
4	Laundries	1	2	8		10	10	
5	Lumber and planing mills	2	156	1		10	8	
6	Milling, grain, and power	1	8			10		
7	Printing and binding	1	1	4		10	10	
	Total	8	278	8				

CLINTON

1	Bed spring manufactures, etc.	1	19		5	10		10
2	Boat building and repairing	1	12			10		
3	Boiler and sheet metal manufactures	2	42			10		
4	Box, shoos and crate manufactures	2	85	1	18	10	10	10
5	Brewing and bottling	2	26			10		
6	Brick and tile manufactures	2	14		5	10		10
7	Building material (jobbing)	1	10			10		
8	Carriage and wagon manufactures	2	98		8	10		10
9	Cigar manufactures	2	12	8		8	8	
10	Clothing (retail)	2	12	1		10	10	
11	Crackers and confectionery mfrs	8	28	21		10	10	
12	Dry goods and general mdse	4	70	74		10	9	
13	Furniture manufactures	4	178	6	10	10	10	10
14	Gas, electric power and transportation	8	70	1		12	10	
15	Harness and leather manufactures	1	70	8		10	10	
16	Hotel	8	18	85		10	10	
17	Livery and express	1	8					
18	Laundries, steam	1	5	80		10	10	
19	Lock and hardware manufactures	1	100	20		10	10	
20	Lumber manufactures	2	515			10		
21	Machine shops and foundries	8	68			10		
22	Machine and structural iron work manufactures	1	100	1		10	10	
23	Milling and grain dealers	1	4			10		
24	Printing and publishing	8	45	14	10	9	9	2
25	Paper dealers and manufactures	2	71	19		10	8	
26	Sash, door and blind manufactures	2	894		96	10		10
27	Skirt and garment manufactures	1	7	48		9	9	
28	Telephone exchange (local)	1	16	9		9	9	
29	Water supply	1	8			9		
30	Wholesale drugs	1	28			9		
31	Wholesale groceries	1	9			10		
	Total	57	2,186	281	82			

a Cause, "general raise of wages everywhere."
 d One establishment only; the second is a new enterprise.

b One establishment only;
 d2 New enterprise; just

CRAWFORD

1	Brick manufactures	1	12		2	10		10
2	Electric light and power	1	4			12		
3	Hotel	1	2	8		12	12	
	Total	8	18	8	2			

a Cause, "scarcity of labor."

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variations in Rate of Wages for 1902 Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 8,116			\$ 8,116				22	6	24	1
45,000			45,000				50		2	2
2,400			2,400				52			8
1,093	\$ 624		1,622				52			4
47,488	860		47,848	α Inc.	α 20.00	α 150	80	20	2	5
1,500			1,500				52			6
520	624		1,144				52			7
\$ 101,090	\$ 1,608		\$ 102,700	2		150				

α "General prosperity" cause.

COUNTY.

\$ 7,280		\$ 1,050	\$ 8,830	α Inc.	α 10.00	α 6	52			1
8,600			8,600	Inc.	10 00	27	12	28	12	2
12,516			12,516				26	26		8
80,010	\$ 800	2,280	83,090				52			4
15,462			15,462				52			5
8,066		800	8,866	β Inc.	β 15.00	β 6	26	7	19	6
4,700			4,700				52			7
45,150		474	45,624	Inc.	5.00	44	42	4	6	8
7,283	645		7,928				40	12		9
7,265	864		7,629				52			10
20,609	8,829		28,988				52			11
88,959	17,439		56,398				52			12
71,580	1,780	2,050	75,410				40	12		18
41,908	480		42,448				52			14
27,710	800		28,510				52			15
4,600	5,200		9,800				52			16
8,744			8,744				52			17
2,705	6,780		9,485				52			18
94,080	6,240		40,830				52			19
177,159			177,159	Inc.	7.00	575	80	22		20
87,065			87,065	α Inc.	α 15.00	α 20	52			21
50,485	600		51,085				52			22
2,200			2,200				52			23
81,157	8,148	926	40,281	Inc.	5.00		52			24
14,000	800		14,800	Inc.	10.00		52	12		25
181,409		1,701	183,110	Inc.	4 00	800	50		2	26
d z			d z							27
9,600	2,250		11,850				52			28
5,000			5,000				52			29
88,485			88,635				52			80
10,452			10,452				52			31
\$ 984,444	\$ 55,685	\$ 8,781	\$ 998,880	11		918				

cause, "scarcity of labor."
started.

c One establishment only; cause, "unionism."

COUNTY.

\$ 8,931		\$ 126	\$ 4,057	α Inc.	α 5.00	α 12	28		24	1
2,725			2,725				52			2
540	\$ 1,044		1,584				52			8
\$ 7,196	\$ 1,044	\$ 126	\$ 8,886	1		12				

EMPLOYERS STATISTICAL REPORT—

DALLAS

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures	5	88			10		
2	Coal mining	1	24			8		
3	General merchandise	1	4			14	10	
4	Light, heat and water supply	8	22			12		
	Total	10	138					

α One establishment only; cause, "good business."

DAVIS

1	Cigar manufactures	1	5			10		
	Total	1	5					

DECATUR

1	Brick and tile manufactures	2	15			10		
	Total	2	15					

α One yard only, cause "scarcity of hands."

DELAWARE

1	Brick manufactures	1	5			10		
2	Carriage manufactures	1	8	1		9	9	
3	Cigar manufactures	1	6		2	10		8
4	Contracting and building	1	12			10		
5	Fence manufactures	1	8			8		
6	Milling, grain and cereals	1	7			10		
7	Water, heat and light supply	2	8			12		
8	Woolen goods manufactures	1	6	7	1	10	10	10
	Total	9	55	8	3			

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employed.	Full force full time	Short time, reduced force.	Suspended.	
\$ 29,742			\$ 29,742	aInc.	a 7.00	a 21	40	12		1
18,262			18,262				40		12	2
2,790	\$ 812		8,042	Inc.	5.00	5	52			8
12,680			12,680				52			4
\$ 58,414	\$ 812		\$ 58,726	2		26				

COUNTY.

\$ 3,442			\$ 3,442				44	8		1
\$ 3,442			\$ 3,442							

COUNTY.

\$ 3,800			\$ 3,800	Inc. a	a 10.00	a 7	80	10	12	1
\$ 3,800			\$ 3,800	1		7				

COUNTY.

\$ 850			\$ 850				20		32	1
3,390	\$ 416		3,796				26	26		2
3,600		\$ 50	3,650				52	26		8
6,000			6,000	Inc.	10.00	12	44	8		4
2,780			2,780				40	12		5
3,090			3,090				52			6
2,541			2,541				52			7
1,970	1,480	65	3,465				32	10	10	8
\$ 24,211	\$ 1,846	\$ 115	\$ 26,172	1		12				

EMPLOYERS STATISTICAL REPORT

DES MOINES

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employes for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Bakery, bread and cakes.....	1	8	2	.....	11	10	.....
2	Basket, rattan work manufactures.	1	60	45	10	10	10	10
3	Box, crate and shook manufactures	1	6	.....	.....	10	.....	.....
4	Brewing and malting.....	1	8	.....	.....	10	.....	.....
5	Brick and tile manufactures.....	2	41	.....	1	10	.....	10
6	Broom manufactures.....	1	12	.....	6	8	.....	8
7	Button (pearl) manufactures.....	1	158	106	28	10	10	10
8	Cigar manufactures.....	4	91	15	.....	8	8	.....
9	Coffin and casket manufactures.....	1	80	7	.....	10	10	.....
10	Clothing and tailoring, retail.....	4	81	.....	2	10	.....	10
11	Commercial agencies.....	1	4	2	1	9	8	8
12	Cooperage manufactures.....	1	16	.....	.....	10	.....	.....
13	Cracker and candy manufactures.....	2	36	21	4	10	10	10
14	Dry goods and general merchandise	8	48	19	.....	10	10	.....
15	Drugs, retail.....	1	7	.....	.....	10	.....	.....
16	Furniture and office fixture mfrs...	8	394	16	16	10	10	10
17	Gas manufactures.....	1	80	.....	.....	10	.....	.....
18	Hardware, furnaces, etc.....	1	10	.....	.....	9	.....	.....
19	Harness and saddlery manufactures	1	70	4	.....	10	10	.....
20	Hotels and restaurants.....	4	88	87	.....	12	10	.....
21	Laundry's.....	1	5	22	1	10	10	10
22	Lumber and lath manufactures.....	2	190	.....	.....	10	.....	.....
23	Machine shop and foundry's.....	1	400	4	.....	10	10	.....
24	Milling, grain, coal and wood.....	1	80	1	.....	10	10	.....
25	Monuments, marble and stone.....	1	8	.....	.....	10	.....	.....
26	Organ manufactures (pipe).....	1	7	.....	.....	10	.....	.....
27	Packing, beef and pork.....	1	16	2	.....	10	9	.....
28	Paper box manufactures.....	1	4	22	4	10	10	10
29	Pickles and vinegar manufactures.....	1	25	12	8	10	10	10
30	Plumbing and heating.....	1	10	.....	.....	9	.....	.....
31	Printing and publishing.....	4	67	24	22	9	9	9
32	Sash, door and blind manufactures	3	80	1	.....	10	10	.....
33	Shirts and overalls manufactures..	1	4	40	.....	10	9	.....
34	Soap manufactures.....	1	86	12	.....	9	9	.....
35	Stone quarries.....	2	16	.....	.....	10	1	.....
36	Tent and awning manufactures.....	1	2	2	.....	8	8	.....
37	Wagons, wheels and carriage mfrs..	4	211	8	.....	10	9	.....
38	Wholesale butter and eggs.....	1	12	3	.....	10	10	.....
39	Wholesale dry goods and notions...	1	8	1	.....	10	10	.....
40	Wholesale fruit and produce.....	1	19	8	.....	10	8	.....
41	Wholesale and retail groceries.....	4	106	18	.....	10	9	.....
42	Wholesale hardware.....	3	49	6	.....	10	9	.....
43	Wholesale and retail ice, wood, coal	2	79	.....	.....	12	.....	.....
44	Wholesale paper and woodenware...	1	11	8	.....	10	8	.....
Total.....		75	2,492	447	96	.....	.....	.....

a. Cause, "clear case had to or men would walk out." b. Cause, "demand for men." males, females and children not reported separately. f. 20 boys are included as carriers 9 hours for a day's work. h. One establishment only. Cause, "demand by union and

DICKINSON

1	Hotel and general merchandise.....	1	15	25	.....	12	12	.....
Total.....		1	15	25	.....	..	..	..

TABLE No. 1.—CONTINUED.

COUNTY.

Total Wages Paid in 1892 to				Variation in Rate of Wages for 1902. Increase, Inc; Decrease, Dec.			Average Number of Weeks in Operation in 1892.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 5,200	\$ 400		\$ 5,600				52			1
13,500	8,000	\$ 1,500	23,000				32	20		2
4,200			4,200	a Inc.	a 10.00	a 4	52			3
6,000			6,000				53			4
9,382		91	9,473	b Inc.	b 10.00	b 90	50		22	5
5,000		500	5,500	b Inc.	b 10.00	b 10	40	10	2	6
49,517	23,299	5,824	78,640				52			7
45,665	2,142		50,797				52			8
15,000	2,100		16,100				50		2	9
25,005		864	25,869				52			10
8,250	500	120	8,870				52			11
8,539			8,539				52	22	4	12
22,045	3,400	150	25,595	b Inc.	b 5.00	b 18	26			13
16,920	5,242		22,162	c Inc.	c 10.00	c 5	52			14
8,800			8,800				52			15
157,179	4,864	2,904	164,947				52			16
14,214			14,214	b Inc.	b 15.00	b 18	52			17
4,617			4,617	a Inc.	a 15.00	a 10	34	18		18
40,000	950		40,950	c Inc.	c 8.00	c 30	52			19
10,834	6,454		17,288				52			20
2,080	4,680	120	6,880				52			21
58,682			58,682	b Inc.	b 20.00	b 190	34	18		22
215,525	1,290		216,785	d Inc.	d 15.00	d 15	50		2	23
20,110	403		20,513	c Inc.	c 10.00	c 8	48	4		24
5,900			5,900	c Inc.	c 10.00	c 8	52			25
2,900			2,900				40	12		26
10,400	720		11,120	b Inc.	b 10.00	b 14	52			27
e	e	e	5,967				50			28
21,725	2,750	525	25,000				52			29
6,691			6,691				40	12		30
42,500	10,500	f 312	53,312	h Inc.	h 6.00	h 40	52			31
43,717	480		49,197	Inc.			40	12		32
1,862	6,708		8,568				44	8		33
13,420	2,270		20,690				52			34
8,760			4,760				80	20		35
900	900		1,800					40		36
92,203	950		93,153				50		12	37
4,755	534		5,289	Inc.	5.00	4	22	30		38
6,280	900		7,180				52			39
e	e	e	12,700				52			40
65,666	4,160		69,266	Inc.	2.00	25	52			41
99,117	2,280		111,097	Inc.	10.00	12	52			42
11,000			11,000	h Inc.	h 10.00	h 75	30	10		43
5,148	680		5,828	Inc.	5.00	14	52			44
\$1,140,815	\$ 97,299	\$ 12,410	\$1,248,591	21	.....	522	..	..	..	

c Cause, "increased business." d Cause, "labor union." e Separate accounts for on one paper only, no salaries given for them. g One firm reported as changing from 10 to better business.

COUNTY.

\$ 1,200	\$ 1,500	.....	\$ 2,700	.....	.....	16	.....	86	1
\$ 1,200	\$ 1,500	.....	\$ 2,700	.....	.....	.....	.....	.....	.....

EMPLOYERS STATISTICAL REPORT—

DUBUQUE

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902			Hours Worked per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Boiler manufactures.....	1	10			10		
2	Books and music wholesale and retail	2	80	7		10	10	
3	Boot and shoe manufactures.....	2	68	8	1	10	10	10
4	Brewing and bottling beers.....	1	120	15		10	10	
5	Brick and tile manufactures.....	1	15			10		
6	Broom and brush manufactures.....	1	13	2	2	10	10	10
7	Button blank manufactures (pearl).	1	298	2		10	10	
8	Carriage and buggy manufactures	2	67	2	1	10	10	10
9	Carriage and wagon manufactures*	*1	*557	*9		*10	*10	
10	Caskets and coffins manufactures...	2	128	28		10	10	
11	Cigar manufactures.....	5	28	141	6	b	b	b
12	Cigars and tobacco, jobbing.....	2	15	1		10	10	
13	Cigar box manufactures.....	1	5	10		10	8	
14	Commercial agencies.....	1	3	2	2	9	9	9
15	Crackers and candy manufactures...	2	49	56		10	10	
16	Crockery and glassware, retail.....	1	20	3	8	10	8	8
17	Dry goods and general merchandise	4	88	98		10	10	
18	Electric power, light and railway....	2	181	2		12	10	
19	Furniture and office fixture mfrs....	8	159			10		
20	Furniture, retail.....	1	7			9		
21	Furs, dyeing and manufacture.....	1	17	8		10	9	
22	Harness and saddlery mfrs.....	2	26	1		10	10	
23	Hotels.....	4	50	72		12	12	
24	Ice, coal and building material.....	1	80			10		
25	Laundry.....	1	8	4		10	10	
26	Lime manufactures.....	1	12			10		
27	Lumber manufactures.....	4	830			10		
28	Machine shops and foundries.....	5	891	9		10	9	
29	Mattress and bed manufactures.....	1	50	8		10	9	
30	Merchant tailoring and clothing.....	2	19	3		10	10	
31	Milling flour and grain.....	1	25	1		10	8	
32	Mineral waters manufactures.....	1	7			10		
33	Packing pork and sausage.....	8	31	1		10	8	
34	Pickles, vinegar and mustard mfrs.	2	8	2		9	9	
35	Plumbing and heating.....	1	12			8		
36	Printing and publishing.....	5	128	22	j 84	8-9	9	j 2-9
37	Pumps and steam fittings mfrs.....	2	248	4	25	10	8	10
38	Rendering and fertilizer mfrs.....	1	7			10		
39	Roofing material manufactures.....	1	40			10		
40	Sash, door and fixture mfrs.....	2	243	50		10		10
41	Shirts, overalls and garment mfrs....	5	180	623	17	i 9-10	i 9-10	i 9-10
42	Soap manufactures.....	1	18	5		10	9	
43	Tobacco manufactures.....	1	9	21		10	10	
44	Tent and awning manufactures.....	1	4			10		
45	Water supply.....	1	13			12		
46	Wholesale beer and liquors.....	2	10	1		10	8	
47	Wholesale coffees and spices.....	1	16	1	2	10	8	10
48	Wholesale and retail drugs.....	1	19					
49	Wholesale fruits and produce.....	1	18	2				
50	Wholesale groceries.....	2	64	12		10	8	
51	Wholesale and retail hardware.....	2	80	8		10	9	
52	Wholesale notions and millinery....	2	10	4		10	9	
53	Wholesale and retail rubber goods.	1	6			10		
54	Wire goods manufactures.....	1	5			10		
Total.....		99	8,835	1,188	192			

a Several raised 50 cents to \$1.00 per week. Cause, "justice." b Cause, "pros-
 obtain better grade of employees." c Cause, "length of service." * The reliability
 spondence and personal interview. d On a firm with 50 employees work 10 hours a day; one
 reports "don't know how much wages he pays, doesn't keep account." e
 i Separate accounts for males and females. Not reported. j Two boys in offices work
 various offices. Causes, "increase in cost of living expenses," "voluntary" and "at instance of
 'voluntary on part of management.'"

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in rate of Wages for 1903. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 4,115			\$ 4,115				40	12		1
18,215	\$ 2,800		21,015	aInc. a	5.00	a 12	52			2
23,338	5,012	\$ 200	28,550				52			3
74,617	2,860		77,477				52			4
4,500			4,500				35			5
7,000	450	150	7,600				52			6
180,000	702		180,702				40	10	2	7
84,642	600	250	85,492				40	22		8
*225,600	*4,200		*229,800							9
60,680	6,460		67,090	Inc.	10.00	50	50		2	10
13,293	23,797	678	37,768				52			11
16,400	800		16,700	Inc.	10.00	4	52			12
c	c	c	c							13
1,800	840	240	2,880				52			14
25,812	9,982		35,794	dInc. d ?		d	48	9		15
8,740	984	432	10,146	eInc. e	10.00	e 28	52			16
17,329	32,839		50,168				52			17
78,808	900		79,208	fInc. f	10.00	f 75	52			18
\$ 68,795			\$ 68,795	gInc. g	5.00	g 150	50		2	19
4,842			4,842				52			20
8,000	\$ 2,200		10,200							21
11,318	800		11,618	hInc. h	10.00	h 4	52			22
19,000	12,750		31,750				52			23
12,160			12,160	eInc. e	3.00	e 80	52			24
1,000	520		1,520				52			25
8,971			8,971							26
141,143			141,143	gInc. g	10.00	g 180	80	20	2	27
234,932	8,890		238,822				52			28
i	i	i	i				96	16		29
8,731	718		9,447				52			30
12,789	848		18,085				46	6		31
2,000			2,000				25			32
14,806	800		15,106				40			33
4,883	1,020		5,903					12		34
18,062			18,062				52			35
83,857	4,490	j \$ 6,817	94,664	kInc. k	10.00	k 120	52			36
145,500	2,200	4,500	152,200				52			37
8,000			8,000	gInc. g	4.00	g 7	38		14	38
14,000			14,000	gInc. g	10.00	g 40	40	12		39
109,259		8,812	117,571	Inc.	10.00	120	50		2	40
154,480	159,758	2,840	316,578				52			41
8,400	1,750		10,150				52			42
6,008	2,323		8,328	mInc. m	3.00	m 21	52			43
1,200			1,200	Inc.	10.00	4	52			44
10,900			10,900				52			45
6,120	420		6,540	Inc.	10.00	6	52			46
12,540	480	416	13,436				52			47
14,955			14,955				52			48
9,500	1,000		10,500				52			49
64,916	5,138		70,052	mInc. m	5.00	m 10	52			50
22,926	1,560		24,486				52			51
6,226	810		7,046				40	12		52
3,200			3,200				52			53
8,000			8,000	Inc.	10.00	5	32	20		54
\$1,984,525	\$294,195	\$ 23,825	\$2,819,846	25		820				

perity." e 10 per cent to station men, 5 per cent to railway men. Cause, "desire to of this firm's report is questioned. Reluctance and evasion was plainly evidenced both by corre- with 106 employes work 9 hours; three firms with 14 employes work 8 hours. f Proprietor g Cause, "men demanded it and scarcity of help." h Cause, "to satisfy men." 9 hours; 32 carrier boys work about 2 hours per day. k Average increase in union." l One union house runs 9 hours per day; employs 90 persons. m Cause,

EMPLOYERS STATISTICAL REPORT—

EMMET

Marginal number.	Industries or Kind of Business.	Number establishments reporting.	Average Number of Employers for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures.....	1	6	.....	.....	10	.....	.....
2	Butter tub and creamery sup. mfrs.	1	10	.....	.....	10	.....	.....
3	Cigar manufactures.....	1	5	.....	1	8	.....	8
4	General merchandise.....	2	8	18	.....	10	10	.....
5	Light and water supply.....	1	6	.....	.....	12	.....	.....
Total.....		6	88	18	1	.....	.....	.....

a Not reported.

FAYETTE

1	Brick and tile manufactures.....	1	10	.....	.....	10	.....	.....
2	Canning (vegetables).....	1	90	40	20	10	8	5
3	Cigar manufactures.....	1	5	.....	.....	10	.....	.....
4	Hotels.....	2	6	25	.....	12	12	.....
5	Laundries.....	1	5	9	.....	10	9	.....
6	Light supply.....	1	5	.....	.....	12	.....	.....
7	Printing and publishing.....	2	5	4	.....	c 9	8	.....
Total.....		9	126	78	20	.....	.....	.....

a Separate accounts for males, females and children not reported.

b Cause,

FLOYD

1	Brick and tile manufactures.....	1	15	.....	.....	10	.....	.....
2	Cigar manufactures.....	1	5	8	.....	8	.....	.....
3	Dry goods and general merchandise	1	.....	8	.....	.....	8½	.....
4	Farm implement manufactures.....	1	8	.....	.....	10	.....	.....
5	Light and water supply.....	2	9	.....	.....	12	.....	.....
6	Nursery and seeds.....	1	48	.....	8	10	.....	10
7	Sash, door and fixture mfrs.....	2	64	2	12	10	8	10
8	Stone quarries.....	1	5	.....	.....	10	.....	10
Total.....		10	154	8	20	.....	.....	.....

a Cause, "increased ability of employes."

b Cause, "increased cost of living"

FRANKLIN

1	Brick and tile manufactures.....	1	6	.....	.....	10	.....	.....
2	Light and power supply.....	1	8	.....	.....	12	.....	.....
3	Milling, flour and grain.....	1	5	.....	.....	10	.....	.....
Total.....		3	14	.....	.....	.....	.....	.....

GREENE

1	Brick and tile manufactures.....	1	25	.....	.....	10	.....	.....
2	Butter manufactures.....	1	9	.....	.....	10	.....	.....
3	General merchandise.....	2	4	2	.....	10	10	.....
Total.....		4	38	2	.....	.....	.....	.....

EMPLOYERS STATISTICAL REPORT—

GUTHRIE

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures	4	37			10		
2	Cigar manufactures.....	2	10		2	8		8
3	Coal mining.....	4	37			8		
4	Woolen goods manufactures.....	1	5	5	1	10	10	10
	Total	18	89	5	3			

HAMILTON

1	Bakery and confectionery.....	1	4	1		10	10	
2	Brick and tile manufactures.....	2	40		1	10		5
3	Chaffer and sieve manufactures.....	1	16	2		10	8	
4	Dry goods, general merchandise.....	1	1	14		10	10	
5	Farm implement manufactures.....	1	46	4		10	9	
6	Foundry and heater manufactures.....	1	25			10		
7	Laundries.....	1	5	30		10	10	
8	Light, heat and water supply.....	1	6			12		
9	Printing and publishing.....	2	17	2	b 8	10	9	b 1-10
10	Telephone exchange.....	1	15	5		10	10	
11	Shoe and slipper manufactures.....	1	60	45		10	10	
12	Wholesale butter, eggs and poultry.....	1	6	1		10	10	
	Total	14	231	104	9			

a Cause, "demand for labor."

b Including six carrier boys who work about one

HANCOCK

1	Brick and tile manufactures.....	1	25			12		
2	Hotel.....	1	1	7		12	12	
3	Light, power and water supply.....	2	6			12		
	Total	4	32	7				

HARDIN

1	Brick and tile manufactures.....	4	58			10		
2	Carriage and wagon manufactures.....	1	4			10		
3	General merchandise.....	4	23	7		12	10	
4	Hotels.....	1	2	6		12	12	
5	Insurance and real estate.....	2	9	6		10	9	
6	Light and heat supply.....	1	5			12		
7	Stone quarries.....	1	10			10		
8	Transfer and drayage.....	1	5			10		
	Total	15	111	19				

a One yard only cause, "to hold our men."

b Cause, "greater demand for labor."

HARRISON

1	Brick and tile manufactures.....	2	16			10		
2	Casket and coffin manufactures.....	1	10	2		10	10	
3	Light, heat and telephone supply.....	1	6	2		12	12	
4	Printing and publishing.....	1	8	6		10	10	
	Total	5	40	10				

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employees.	Full force full time.	Short time reduced force.	Suspended.	
\$ 8,647			\$ 8,647				80		22	1
4,300		\$ 200	4,500				52			2
9,700			9,700				26		26	3
1,983	\$ 688	88	2,740				27		25	4
\$ 24,618	\$ 688	\$ 286	\$ 25,592							

COUNTY.

\$ 2,150	\$ 850		\$ 2,500				52			1
14,050		\$ 37	14,087				32		20	2
8,400	800		9,200				30	12	10	3
800	4,800		5,100				52			4
25,000	1,600		26,600	ainc	a 5.00	a 25	50	2		5
10,000			10,000				26	26		6
4,000	8,000		12,000				52			7
8,600			8,600				52			8
9,800	600	512	10,912				52			9
9,000	1,500		10,500				52			10
10,000	6,000		16,000				20	8	24	11
2,500	800		2,800				52			12
\$ 98,800	\$ 28,950	\$ 549	\$ 128,299	1		25				

hour per day.

COUNTY.

\$ 8,000			\$ 8,000				32		20	1
200	\$ 1,800		1,500				52			2
2,178			2,178				26		27	3
\$ 10,878	\$ 1,800		\$ 11,678							

COUNTY.

\$ 17,262			\$ 17,262	ainc.	a 7.00	a 20	32			1
2,500			2,500				52			2
12,835	2,890		15,225				52			3
490	1,000		1,490				52			4
6,450	2,460		8,910				52			5
8,085			8,085				52			6
4,000			4,000	binc.	b 20.00	b 10	96		16	7
2,900			2,900	binc.	b 10.00	b 5	52			8
\$ 49,492	\$ 5,850		\$ 55,942	8		85				

COUNTY.

\$ 8,600			\$ 8,600				24		28	1
1,600	\$ 96		1,696				16		86	2
8,625	420		4,045				52			3
2,200	880		8,080				52			4
\$ 11,025	\$ 1,346		\$ 12,871							

EMPLOYERS STATISTICAL REPORT—

HENRY

Marginal number.	Industry and Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males	Adult females	Children under 16.	Adult males	Adult females	Children under 16.
1	Brick and tile manufactures	2	16	.....	8	10	.....	10
2	Cigar mfg. and planing mill	1	5	.....	1	10	.....	8
3	Hotel	1	2	6	.....	12	12	.....
4	Printing and publishing	2	10	9	.....	9	9	.....
	Total	6	33	15	4	.....	.....	.....

a Cause, one firm says "increased efficiency" the other "threatened to strike."

HOWARD

1	Dry goods and general merchandise	1	6	6	.....	11	10	.....
2	Hotels	1	2	7	.....	12	12	.....
3	Laundries	1	1	4	.....	10	5	.....
4	Tow manufactures	2	20	.....	.....	10	.....	.....
	Total	5	29	17	.....	.....	.....	.....

HUMBOLDT

1	Brick and tile manufactures	1	9	.....	.....	10	.....	.....
2	Dry goods and general merchandise	1	5	8	.....	12	10	.....
3	Laundries	1	4	4	.....	10	10	.....
4	Milling and light supply	2	4	.....	.....	12	.....	.....
	Total	5	22	12	.....	.....	.....	.....

IDA

1	Brick and tile manufactures	1	10	.....	.....	10	.....	.....
2	Light and heat supply	1	5	.....	.....	12	.....	.....
3	Lumber (wholesale and retail)	2	13	.....	.....	10	.....	.....
	Total	4	23	.....	.....	.....	.....	.....

IOWA

1	Brick and tile manufactures	3	46	.....	.....	10	.....	.....
2	Dry goods and general merchandise	1	3	2	.....	12	12	.....
3	Milling and grain	1	8	.....	.....	10	.....	.....
	Total	5	57	2	.....	.....	.....	.....

a Increase in one yard only; cause, "scarcity of help."

JACKSON

1	Butter making	1	2	.....	.....	10	.....	.....
2	Cigars and tobacco manufactures	2	8	1	.....	8	8	.....
3	Hotels	1	6	19	.....	10	10	.....
4	Lime manufactures	2	14	.....	.....	10	.....	.....
5	Water supply	1	2	.....	.....	12	.....	.....
6	Woolen goods manufactures	1	8	8	.....	10	10	.....
	Total	8	40	23	.....	.....	.....	.....

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 3,940	.....	\$ 288	\$ 4,228	.....	.....	.....	80	15	7	1
1,880	.....	50	1,930	.....	.....	.....	40	.....	12	2
500	\$ 1,000	.....	1,500	.....	.....	.....	52	.....	.....	3
3,962	2,548	.....	6,500	aInc.	a 10.00	a 19	52	.....	.....	4
\$ 10,272	\$ 3,548	\$ 398	\$ 14,153	2	.....	19	.....	.....	.....	

COUNTY.

\$ 2,792	\$ 1,680	.....	\$ 4,422	.....	.....	.....	52	.....	.....	1
480	1,478	.....	1,958	.....	.....	.....	52	.....	.....	2
313	780	.....	1,093	.....	.....	.....	52	.....	.....	3
1,000	.....	.....	1,000	.....	.....	.....	6	.....	46	4
\$ 4,585	\$ 3,886	.....	\$ 8,471	.....	.....	.....	.....	.....	.....	

COUNTY.

\$ 3,672	.....	\$ 3,672	.....	.....	.....	.....	28	7	17	1
2,520	3,000	6,120	Inc.	5.00	18	.....	52	.....	.....	2
1,740	1,288	3,028	Inc.	1.00	8	.....	46	.....	.....	3
2,120	.....	2,120	.....	.....	.....	.....	52	.....	.....	4
\$ 10,062	\$ 4,888	\$ 14,940	2	.....	21	.....	.....	.....	.....	

COUNTY.

\$ 2,054	.....	\$ 2,054	.....	.....	.....	.....	22	.....	80	1
3,200	.....	3,200	.....	.....	.....	.....	52	.....	.....	2
7,920	.....	7,920	.....	.....	.....	.....	40	12	.....	3
\$ 13,174	.....	\$ 13,174	.....	.....	.....	.....	.....	.....	.....	

COUNTY.

\$ 10,535	.....	\$ 10,535	aInc.	a 5.00	a 11	.....	82	.....	20	1
2,000	750	2,750	.....	.....	.....	.....	52	.....	.....	2
3,300	.....	3,300	.....	.....	.....	.....	52	.....	.....	3
\$ 15,885	\$ 750	\$ 16,585	1	.....	11	.....	.....	.....	.....	

COUNTY.

\$ 1,200	.....	\$ 1,200	Inc.	5.00	2	.....	52	.....	.....	1
10,140	520	10,660	.....	.....	.....	.....	52	.....	.....	2
2,000	4,000	6,000	.....	.....	.....	.....	52	.....	.....	3
3,900	.....	3,900	Inc.	5.00	12	.....	28	10	14	4
1,140	.....	1,140	.....	.....	.....	.....	52	.....	.....	5
300	80	380	.....	.....	.....	.....	19	.....	40	6
\$ 18,680	\$ 4,600	\$ 23,280	8	.....	14	.....	.....	.....	.....	

EMPLOYERS STATISTICAL REPORT—

JASPER

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures.....	4	34			10		
2	Clothing manufactures.....	1	20	55	3	10	10	10
8	Coal mining.....	2	13			8		
4	Dry goods and general merchandise.	1	20	10		11	11	
5	Foundries and farm impl. mfrs.....	8	121	1		10	9	
6	Hotels and baths.....	1	9	15		10	10	
7	Incubator manufactures.....	1	27	3		10	9	
8	Water, heat and light supply.....	2	8			12		
9	Wind stacker manufactures.....	1	41	4		10	9	
Total.....		16	298	88	8			

a Cause, "demand for labor."

b Separate accounts for adult males; females or

JEFFERSON

1	Brick and tile manufactures.....	1	18			10		
2	Brush and mop manufactures.....	1	4	1		10	10	
8	Cigar manufactures.....	1	5		1	8		8
4	Farm implement manufactures.....	1	81	2		10	8	
5	Glove and mitten manufactures.....	1	4	36		10	10	
6	Handle manufactures (tool).....	1	12			10		
7	Printing and publishing.....	1	6	4		10	10	
8	Wagon manufactures.....	1	63	1		10	10	
Total.....		8	148	44	1			

a Cause, "length of service."

b Cause, "general tendency to demand higher

JOHNSON

1	Bread and cake bakery.....	1	4	2		10	10	
2	Brewing and malting.....	1	8			10		
8	Brick and tile manufactures.....	8	89			10		
4	Cigar manufactures.....	1	5			8		
5	Clothing and tailoring.....	1	4	1		10	10	
6	Dry goods and general mdae.....	1	5	17		11	9	
7	Glov and novelty manufactures.....	1	2	18		10	9	
8	Hand knit goods manufactures.....	1	5	5	b	5	b	b
9	Hotels.....	1	6	5		10	10	
10	Laundries.....	2	8	10		10	10	
11	Machine, boiler shop and repairing.	1	6			9		
12	Perfume and toilet preparation mfs.	2	10	31	8	9	9	9
18	Printing and publishing.....	2	18	6	d 15	9	9	d 9
14	Water supply.....	1	5	1		12	7	
15	Wholesale groceries.....	1	7	1		10	8	
16	Wholesale jewelry and manufactory	1	7	20		9	9	
Total.....		21	182	112	28			

a Cause, "men struck" faithful service, demand for labor."

b Three adult males, two adult females regular employees; d Thirteen carrier boys work about two hours per

JONES

1	Brick manufactures.....	1	8			10		
2	Duster manufactures.....	1	14	27		10	10	
8	Stone quarries.....	8	88			10		
4	Water and light supply.....	2	4			10		
Total.....		7	109	27				

TABLE No. 1—CONTINUED.

COUNTRY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 6,670			\$ 6,670				24		28	1
b	b	b	b	a inc.	a 5.00	a 60	40	12		2
8,750			8,750	c Inc.	c 10.00	c 13	25	20	7	3
11,000	8,000		14,000	Inc	7.00	11	52			4
52,450	8,000		58,550	Inc.	5.00	96	32	16	4	5
3,000	3,000		6,000				52			6
6,000	1,000		7,000	a inc.	a 12.00	a 30	18	15	19	7
4,040			4,040				52			8
12,484	865		12,849				80	22		9
\$ 100,494	\$ 7,965		\$ 128,115	7		210				

children not reported.

c Causes, "strike and shortage of hard coal."

COUNTRY.

\$ 5,000			\$ 5,000				32			1
1,200	\$ 800		1,500				32	12	8	2
1,800			2,050				52			3
14,674	597	\$ 250	15,271	a inc.	a 10.00	a 24	52			4
1,000	4,000		5,000				40	12		5
500			500				12			6
2,850	850		3,700	b inc.	b 10.00	b 10	52			7
27,600	450		28,050				50			8
\$ 54,084	\$ 6,197	\$ 250	\$ 61,131	2		34				

wages."

COUNTRY.

\$ 2,000	\$ 650		\$ 2,650				52			1
4,080			4,080				52			2
6,500			6,500	a inc.	a 15.00	a 15	24		28	3
2,800			2,800				50		2	4
2,500	\$ 800		2,800				52			5
3,588	5,900		9,488				52	20		6
900	5,000		5,900				52			7
2,800	2,700		5,500				50			8
1,680	960		2,580				52			9
3,427	2,900		6,327	d Dec.	d 12.00	d 2	52			10
2,700			2,700	Inc.	10.00	3	52			11
6,700	11,500	\$ 1,475	21,675	e Inc.	e 10.00	e 22	52			12
3,084	3,180	1,753	13,117	e inc.	e 8.00	e 5	52			13
4,020	860		4,880	e inc.	e 5.00	e 5	52			14
5,200	825		5,525				52			15
9,900	12,625		22,525				52			16
\$ 68,969	\$ 46,370	\$ 3,228	\$ 118,567	8		52				

from 150 to 200 are employed at their homes; hours irregular.

c Cause, "better business,

day.

e Cause, "efficiency."

f Decrease no cause given.

COUNTRY.

\$ 2,000			\$ 2,000				25		27	1
4,167	\$ 4,271		8,438				33	16	5	2
30,782			30,782				40	12		3
1,456			1,456				52			4
\$ 38,495	\$ 4,271		\$ 42,876							

EMPLOYERS STATISTICAL REPORT

KEOKUK

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average number of Employees for 1902.			Hours Worked Per Day by		
			Adult males	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures	2	19			10		
2	Coal mining	5	216		8	8		8
8	Light and power supply	1	2			10		
4	Mining tool manufactures	2	25		6	9		9
	Total	10	262		11			

a Cause, "good times, scarcity of labor."

KOSSUTH

1	Bottling mineral waters	1	7			10		
2	Brick manufactures	1	4			10		
8	Butter tub and tank manufactures	1	13	1		10	10	
5	Candy and butter manufactures	2	2	2	2	10	8	10
4	Cigar manufactures	1	10			8		
6	Foundry and machine shop	1	8			10		
7	Laundries	1	7	4		10	10	
8	Lumber and general merchandise	2	9			10		
	Total	10	60	7	2			

LEE

1	Boot and shoe manufactures	1	140	125	60	10	10	10
2	Brewing and malting	1	9			10		
8	Brick and tile manufactures	1	11		1	9		9
4	Briggy shaft manufactures	1	80			10		
5	Butter manufactures	1	8			10		
6	Button blank mfrs, free labor	1	60			10		
7	Button blank mfrs, convict labor	1	60			10		
8	Canning, vegetables and pickles	4	90	162	40	10	10	10
9	Carriage and wagon manufactures	2	11			10		
10	Chair mfrs, free and convict labor	1	150			10		
11	Clothing and tailoring	1	28	5		11	10	
12	Cigar manufacturers	2	11			8		
13	Collar (horse) manufactures	1	25		1	9		9
14	Cooperage, manufacture s	2	85		6	10		10
15	Dry goods and general merchandise	1	8	16		10	9	
16	farm tool and implement mfrs	8	329	4		10	10	
17	Foundries and machine shops	2	23			10		
18	Hardware & electric specialties mfrs	2	26	6		10	9	
19	Hotels	8	27	19	1	12	12	12
20	House furnishings, hardware	2	27	4		10	9	
21	Ice, wood and coal retailers	3	174	1		10	10	
22	Insurance (fire, etc.)	1	16	15		8	8	
23	Laundries	2	5	13	2	10	9	9
24	Light and power supply	4	52	2		12	9	
25	Lumber and planing mills, sash, door and office fixtures, mfrs	6	569	25	2	10	10	10
26	Medicine manufactures	1	10	10		10	10	
27	Milling, flour and grain	1	6			10		
28	Paper manufactures and dealers	2	42	5		10	10	
29	Poultry dressing and feathers	1	45			10		
30	Powder manufactures	1	175	2	5	10	10	10
31	Plumbing and heating	1	14			10		
32	Printing and publishing	4	43	10	43	g 8-9	g 8-9	f 8-9-2

a Free labor, \$14,695; convict labor, \$14,943. harvest.

c Cause, "prosperous conditions."

b Cause, "scarcity of labor."

f Thirty-nine boys are carriers, work

—TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease Dec.			Average number of weeks in operation.			Marginal number.
Adult males.	Adult females.	Children under 16	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time reduced force.	Suspended.	
\$ 4,900			\$ 4,900	Inc.	10.00	19	24	7	21	1
100,247		\$ 960	101,207				35	12	5	2
1,200			1,200				52			3
16,472		468	16,940				52			4
\$ 122,819		\$ 1,428	\$ 124,247	2		19				

COUNTY.

\$ 1,600			\$ 1,600				52			1
322			322				16		36	2
7,700	\$ 800		8,000				52			3
1,020	288	816	1,624				26	26		4
5,200			5,200				52			5
2,340			2,340				16	36		6
1,925	1,040		2,965				52			7
4,530			4,530				52			8
\$ 24,637	\$ 1,628	\$ 816	\$ 26,581							

COUNTY.

\$ 90,904	\$ 43,750	\$ 12,000	\$ 146,654				50		2	1
4,680			4,680				52			2
2,200		60	2,260				26		26	3
2,283			2,283				8		44	4
6,240			6,240				52			5
20,000			20,000				40		12	6
3,000			3,000				30	20	2	7
9,257	5,801	856	15,414				8	4	40	8
5,127			5,127	Inc.	10.00	2	40	12		9
29,688			29,688				50	8	2	10
14,700	800		15,500				36	16		11
4,800			4,800				45	7		12
10,000		100	10,100	Inc.	10.00	9	40	8	4	13
23,500		500	24,000	b Inc.	b 15.00	b 85	30	20	2	14
6,104	5,650		11,758				52			15
96,972	1,020		97,992				52			16
12,546			12,546				52			17
9,853	1,782		11,185				40	12		18
8,445	8,188	75	11,708	c Inc.	c 10.00	c 4	52			19
10,231	1,624		11,855	c Inc.	c 15.00	c 7	40	12		20
18,320	800		18,620				d 84	d 18		21
12,420	7,080		19,500	c Inc.	c 2.00	c 18	52			22
2,362	2,700	888	5,490				52			23
23,446	794		29,240				52			24
177,891	4,681	816	182,888	c Inc.	c 10.00	c 11	40	12		25
6,000	2,900		8,900	c Inc.	c 10.00	c 20	52			26
8,600			8,600	e Inc.	e 15.00	e 6	45		7	27
16,008	966		17,569				40	6	6	28
27,850			27,850				40	12		29
68,000	600	720	64,320				50		2	30
6,780			6,780				52			31
81,637	2,706	f 2,458	84,816	g Inc.	g 10.00	g 80	52			32

c Cause, "old valued employees' merit." d 150 men work only six weeks during ice about 2 hours per day. g Increase caused by giving the 10 hour rate for 8 and 10-hour day.

EMPLOYERS STATISTICAL REPORT—

LEE

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
33	Shirts, overalls and clothing mfs.	1	10	140	.....	10	10	.....
34	Starch manufactures.	1	9	24	.....	10½	9½	.....
35	Transfer, storage and drayage.	1	16	.....	.....	10	.....	.....
36	Wholesale drugs.	1	8	.....	.....	10	.....	.....
37	Wholesale groceries.	4	74	10	.....	10	9	.....
38	Wholesale and retail jewelry.	1	16	5	.....	9	9	.....
39	Wholesale oils.	1	11	8	.....	10	10	.....
Total.		70	2 457	606	161	.....	.....	.....

LINN

1	Brewing and malting.	1	35	.....	.....	10	.....	.....
2	Brick and tile manufactures.	3	28	.....	.....	10	.....	.....
3	Candy and cracker manufactures.	2	47	110	3	10	10	10
4	Carriage and wagon manufactures.	2	25	.....	.....	10	.....	.....
5	Cigar manufactures.	1	8	2	2	8	9	9
6	Creamery supplies, jobbing and mfs.	2	40	.....	.....	10	.....	.....
7	Cutlery manufactures.	1	19	1	.....	10	10	.....
8	Dry goods and general merchandise.	5	60	101	4	11	10	10
9	Fence manufactures.	1	21	1	.....	10	10	.....
10	Furniture manufactures.	2	48	2	2	10	10	10
11	Furniture retail.	1	8	.....	.....	10	.....	.....
12	Hotels and restaurants.	4	48	65	.....	12	10	.....
13	Insurance (fire).	1	24	.....	.....	8	.....	.....
14	Laundries, steam.	3	15	47	.....	10	10	.....
15	Light and water supply.	2	30	.....	.....	12	.....	.....
16	Lumber and planing mills.	3	16	.....	.....	10	.....	.....
17	Machine and boiler shops (job).	2	60	.....	1	9	.....	10
18	Machine manufactures.	1	9	7	.....	10	9	.....
19	Milling, flour, grain and cereals.	2	191	245	180	12	10	10
20	Packing, beef and pork.	1	470	10	111	10	10	10
21	Painting and wall paper.	2	27	9	.....	8-10	9	.....
22	Printing, publishing and binding.	3	99	17	6	8-9	9	5
23	Pump manufactures and jobbing.	2	133	3	.....	10	9	.....
24	Sash, doors and fixture mfs.	1	99	1	20	10	8	10
25	Street railway and transportation.	1	85	.....	.....	10-12	.....	.....
26	Stone quarries.	1	9	.....	.....	10	.....	.....
27	Transfer, storage and drayage.	1	4	2	.....	10	9	.....
28	Wholesale groceries.	2	40	.....	.....	10	.....	.....
29	Wholesale and retail ice.	1	25	.....	.....	10	.....	.....
30	Wholesale liquors.	1	9	.....	.....	10	.....	.....
31	Wind-mill and tank manufactures.	1	16	1	.....	10	9	.....
Total.		56	1,754	618	323	.....	.....	.....

a Cause, "scarcity of labor," "demanded." b Cause, "high price of meat," and "efficiency." c Cause, "emphatic demand on part of 30 per cent of employes and balance on ice harvest for 4 or 6 weeks, 250 are employed."

LOUISA

1	Brick and tile manufactures.	2	14	.....	.....	10	.....	.....
2	Canning, vegetables.	1	150	50	.....	10-15	10-15	.....
3	Sorghum manufactory.	1	4	.....	.....	10	.....	.....
Total.		4	168	50	.....	.....	.....	.....

a Cause, "good times;" b Separate accounts for males and females not reported.

TABLE No. 1—CONTINUED.

COUNTY—CONTINUED.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 7,500	\$ 39,000		\$ 46,500				52			33
6,896	5,289		12,185				52			34
7,800			7,800				52			35
6,964			6,964				52			36
61,154	3,862		64,516				52			37
11,128	1,852		12,480				52			38
6,868	1,740		8,608				52			39
\$ 875,133	\$ 136,485	\$ 16,918	\$1,028,536	14		187				

COUNTY.

\$ 22,454			\$ 22,454	Inc.	a 10.00	a 14	52			1
7,383			7,383	Inc.	a 10.00	a 14	24		26	2
23,000	\$ 15,000	\$ 800	38,800	Inc.	a 10.00	a 18	52			3
14,500			14,500	Inc.	a 10.00	a 18	40	12		4
6,656	286		6,942	Inc.	10.00	28	52			5
18,523			18,523	Inc.	10.00	28	40	12		6
7,880	250		8,130	Inc.	5.00	88	52			7
84,128	35,745	200	70,071	Inc.	5.00	88	52			8
10,500	30		10,800	Inc.	5.00	88	52			9
25,000	500	250	25,750	b Inc.	b 10.00	b 24	40	9	3	10
5,000			5,000	Inc.	10.00	16	52			11
11,240	11,650		22,890	Inc.	10.00	17	52			12
29,667			29,667	c Inc.	c	c 9	52			13
7,471	11,023		18,499	Inc.	10.00	17	52			14
17,218			17,218	Inc.	2.00	8	52			15
9,960			9,960	Inc.	10.00	16	52			16
35,572			35,572	Inc.	10.00	16	52			17
5,300	1,500		6,800	Inc.	10.00	16	52			18
118,921	102,950	32,400	254,271	b Inc.	b 10.00	b 12	48	4		19
284,400	2,675	13,457	287,532	d Inc.	d 8.00	d 17	52			20
13,500	1,650		15,060	d Inc.	d 8.00	d 17	52			21
63,470	5,804	400	69,674	e Inc.	e 20.00	e 85	52			22
53,000	1,500		54,500	f Inc.	f 20.00	f 85	52			23
42,500	450	3,000	45,950	f Inc.	f 20.00	f 85	52			24
45,424			45,424	f Inc.	f 20.00	f 85	52			25
3,000			3,000	f Inc.	f 20.00	f 85	52			26
2,000	1,000		3,000	f Inc.	f 20.00	f 85	52			27
88,008			88,008	f Inc.	f 20.00	f 85	52			28
15,500			15,500	f Inc.	f 20.00	f 85	52			29
8,760			8,760	f Inc.	f 20.00	f 85	52			30
11,230	400		11,630	f Inc.	f 20.00	f 85	52			31
\$ 975,968	\$192,388	\$ 10,507	\$1,218,863	15		866				

"other living expenses." c Earned more on commissions, greater efficiency. d Cause, account of length of service and good will of employers." f Average for year 25 men during

COUNTY.

\$ 2,925			\$ 2,925	Inc. a	a 7.00	a 6	18	4	30	1
b 90	b		b 5,176				4	15	33	2
			90				8		49	3
\$ 3,015			\$ 3,191	1		6				

EMPLOYERS' STATISTICAL REPORT—

LUCAS

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick manufactures.	1	10	.....	.....	10	.....	.....
2	Carriage and wagon manufactures.	1	14	.....	.....	10	.....	.....
3	Coal mining.	2	488	.....	.....	8	.....	.....
4	Dry goods and general merchandise.	2	10	17	.....	12	12	.....
5	Hardware manufactures.	1	14	.....	.....	9	.....	.....
6	Hotels.	1	5	7	.....	12	12	.....
7	Lumber and grain.	1	15	1	.....	10	8	.....
Total		9	506	25	.....	.....	.....	.....

MAHASKA

1	Bakeries and groceries.	2	12	1	1	11	11	11
2	Brick and tile manufactures.	3	73	.....	.....	10-11	.....	.....
3	Cigar manufactures.	3	26	1	1	8-10	9	10
4	Coal mining.	7	677	.....	6	8	.....	8
5	Cracker and candy manufactures.	1	10	10	.....	.....	10	.....
6	Dry goods and general merchandise.	2	24	79	.....	10	10	.....
7	Hardware and jobbing.	1	13	1	.....	10	10	.....
8	Harness manufactures.	2	17	1	2	10	10	10
9	Heater manufactures.	2	40	1	.....	10	10	.....
10	Hotels.	2	19	29	.....	12	10	.....
11	Laundries.	1	7	9	2	9	9	9
12	Light and water supply.	3	15	.....	.....	12	.....	.....
13	Printing and publishing.	3	26	14	.....	9-10	9-10	.....
14	Sash, door and fixture manufactures.	1	12	.....	.....	9	.....	.....
15	Shirts and overalls manufactures.	1	8	82	.....	9	9	.....
16	Telephone exchange (local).	1	6	18	.....	9	8	.....
17	Transfer and drayage.	1	23	1	.....	15	10	.....
18	Wagon box manufactures.	1	40	.....	.....	9	.....	.....
19	Wholesale and retail drugs.	1	8	1	.....	12	10	.....
20	Wholesale egg and poultry dealers.	1	10	.....	.....	10	.....	.....
21	Wholesale groceries.	1	24	3	.....	10	9	.....
Total		40	1,090	251	12	.....	.....	.....

a Cause, "length of service" and "efficiency." b Cause, "railroad construction"
d Cause, "clerks' union and good business." e Cause, "better prices for product."

MARION

1	Brick and tile manufactures.	2	21	.....	.....	10	.....	.....
2	Coal mining.	3	415	.....	.....	8	.....	.....
3	Canning vegetables.	2	17	63	5	10	10	10
4	Cigar manufactures.	2	4	.....	8	10	.....	10
5	Stacker manufactures.	1	29	1	.....	9	8	.....
6	Wagon manufactures.	2	49	.....	.....	10	.....	.....
7	Water supply.	2	5	.....	.....	10	.....	.....
8	Telephone exchange (local).	1	14	7	.....	10	9	.....
Total		15	554	71	8	.....	.....	.....

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employees.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 2,500			\$ 2,500				25		27	1
7,500			7,500				52			2
272,991			272,991				42		10	3
8,730	\$ 8,600		7,330	Inc.	10.00	6	52			4
4,000			4,000				24	28		5
1,560	1,082		2,642				52			6
6,100	890		6,990				52			7
\$ 298,281	\$ 5,052		\$ 303,333	1		5				

COUNTY.

\$ 6,472	\$ 208	\$ 240	\$ 6,920	a \$200	b 15.00	a 2	52			1
28,770			28,770	b Inc.		b 68	30		14	2
11,870	250	156	12,276				50	8		3
419,846		1,240	421,086				26	16	10	4
4,350	2,000		6,350	c 600	d 10.00	c 20	50		2	5
15,400	27,440		42,840	d Inc.	a 10.00	d 60	52			6
12,040	400		12,440	a Inc.		a 7	52			7
8,800	780	208	9,788	e 10.00		e 10.00	52			8
21,000	400		21,400	e Inc.		e 28	48		4	9
7,160	6,900		14,060				52			10
8,048	2,298	416	5,668	a		a	52			11
9,220			9,220	a 800		a 8	52			12
14,020	4,100		18,120				52			13
5,300			5,300	f Inc.	f 10.00	f 90	60		2	14
5,100	18,000		23,100	f Inc.			45		7	15
4,500	8,600		8,100				52			16
10,874	515		11,389	g Inc.	g 10.00	g 24	52			17
13,000			13,000	a Inc.	a 10.00	a 40	45	6	1	18
5,980	600		6,580	a Inc.	a 5.00	a 5	52			19
2,026			2,026				16	84	2	20
15,900	1,245		17,145				52			21
\$ 622,524	\$ 68,074	\$ 2,260	\$ 693,458	14		847				

made labor scarce." c Cause, "demanded by employees and allowed to save trouble."
 f Cause, "advance in scale per union agreement." g Cause, "high living expenses."

COUNTY.

\$ 4,000			\$ 4,000				26		26	1
177,283			177,283				40	10	2	2
1,748	\$ 1,948	\$ 50	8,736				4	10	88	3
1,900		296	2,195				40	12		4
12,000	480		12,480				36	16		5
16,144			16,144	Inc	10.00	20	42	10		6
1,680			1,680				52			7
7,200	2,115		9,315				52			8
\$ 221,885	\$ 4,493	\$ 845	\$ 223,723	1		20				

EMPLOYERS STATISTICAL REPORT

MARSHALL

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Brick and tile manufactures	6	67	2		10		
2	Cigar manufactures	2	9		2	8	8	8
3	Coffee and spice preparations	1	7	1		10	10	
4	Door mat (steel) manufactures	1	5	8		10	8	
5	Dry goods and general mdse	4	17	19		10	10	
6	Foundries, machine shops and structural iron works	8	159	8		10	10	
7	Furniture, carpets and hardware	2	11	8		10	9	
8	Hides, wool and tallow	1	16	1		10	8	
9	Laundries	2	7	22		10	10	
10	Light and water supply	8	18	1		8-10	8	
11	Lumber (retail)	1	5	1		10	8	
12	Milling, flour and grain	1	6	1		10	9	
13	Packing pork, etc	1	110	10	5	10	10	10
14	Pickles and vinegar manufactures	1	8	7		10	10	
15	Printing and publishing	2	40	5	b 20	9	9	b
16	Sash, doors and fixtures mfrs.	1	14	1		10	10	
17	Sheet metals and cornice mfrs.	1	5	1		10	6	
18	Syrup and candy manufactures	1	13	3		10	10	
19	Tailoring and clothing (men's)	1	8	2		9	9	
20	Trowel manufactures	1	8	1	2	9	9	9
21	Wholesale grocers	1	19	1	1	10	9	10
22	Wholesale oils and greases	1	29	6		10	9	
23	Wholesale crackers and cakes	1	8	4		10	10	
Total		39	594	102	80			

a Cause, "scarcity of labor; farmers bid the price up." value to company.

c Not reported.

b Nineteen are carrier

MILLS

1	Brick and tile manufactures	1	14			10		
2	Neck yoke manufactures	1	1	1	1	8	8	8
Total		2	15	1	1			

a Cause, "demand."

MONROE

1	Coal mining	6	1,883	2	40	8	8	8
2	Hotel	1	4	8		10	10	
3	Light and power supply	1	4	1		12	8	
Total		8	1,891	11	40			

TABLE No.—1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 14,330			\$ 14,330	a Inc.	a 15.00	a 40	24		28	1
5,070	\$ 442	\$ 812	5,824				52			2
6,000	600		6,600				52			3
3,500	2,500		6,000				46	6		4
8,700	6,580		15,280				52			5
77,480	1,440		78,920				52			6
8,780	980		9,760				52			7
9,600	520		10,120	Inc.	10.00	17	52			8
4,472	6,008		10,480				52			9
1,208	600		11,808				52			10
2,851	780		3,631				52			11
3,614	208		3,822				52			12
53,320	4,880	186	58,686				52			13
6,500	2,500		9,000				52			14
28,453	1,524	b	29,977				52			15
10,800	900		11,700				52			16
2,500	200		2,700				52			17
10,086	884		10,970				40		12	18
6,500	800		7,300	c Inc.	c 10.00	c 10	40	12		19
2,800	812	\$ 180	3,292				52			20
17,500	720	180	18,400	d 800	d	d 8	52			21
10,322	1,040		11,362				52			22
e	e		e				15	81	6	23
\$ 304,814	\$ 33,696	\$ 867	\$ 339,377	5		70				

boys; hours and wages not reported.

c Cause, "unions."

d Cause, "increased

COUNTY.

\$ 2,500			\$ 2,500	a Inc.	a 25.00	a 14	24		28	1
520	\$ 240	\$ 60	820				26	26		2
\$ 3,020	\$ 240	\$ 60	\$ 3,320	1		14				

COUNTY.

\$1,814,276	\$ 900	\$ 10,880	\$1,825,556	.....	.....	.....	45		7	1
980	1,200		2,180	.....	.....	.....	52			2
2,000	240		2,240	Inc.	8.00	2	52			3
\$1,817,256	\$ 2,340	\$ 10,880	\$1,829,956	1		2				

EMPLOYERS STATISTICAL REPORT

MONTGOMERY

Marginal number.	Industry or Kind of Business.	Number of establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Bee hive and supply manufactures	1	37	1	...	10	9	...
2	Brick, tile and pottery mfrs	3	57	...	8	10	...	10
3	Butter tubs and barrel mfrs.	1	5	...	...	12	...	...
4	Cigar manufactures	2	16	...	...	8	...	...
5	Foundry and machine shop	1	12	1	...	10	9	...
6	Hotels	1	1	4	...	10	10	...
7	Laundry	1	...	8	...	...	10	...
8	Milling and light supply.	2	12	1	...	10	2	...
9	Printing and publishing.	1	50	50	...	10	10	...
10	Wholesale groceries	1	4	2	...	10	9	...
Total		14	194	62	8	...	...	...

a Cause, "general prosperity."

b Cause, "higher living expenses."

c Cause,

MUSCATINE

1	Boxes, crates and shoo k mfrs	2	194	1	17	10	10	10
2	Brick and tile manufactures	3	27	...	...	10	...	...
3	Broom manufactures	1	5	...	...	10	...	...
4	Buttons and blank mfrs. (pearl)	16	977	621	110	10	10	10
5	Cigar manufactures	8	14	9	1	8	8	8
6	Contractor and builder	1	12	...	...	10	...	...
7	Dry goods (retail)	2	2	...	...	14	...	...
8	Dry goods and general merchandise	2	21	23	...	11	10	...
9	Foundries and machine shops	4	89	2	...	10	10	...
10	Laundries	2	7	12	2	12	10	6
11	Lumber and lath manufactures.	1	200	2	12	10	10	10
12	Milling, grain and cereals	1	72	88	...	10	10	...
13	Printing and publishing	2	29	8	...	9	9	...
14	Saddlery hardware manufactures	1	30	1	...	10	9	...
15	Sash, door and fixture mfrs	2	541	8	38	10	10	10
16	Wholesale groceries	2	22	1	...	10	9	...
Total		45	2,245	771	175	...	...	...

a Cause, "scarcity of help and increased living expenses."

b Cause, "carpenters"

O'BRIEN

1	Brick and tile manufactures	2	80	...	...	10	...	...
2	Laundries	1	3	5	...	10	10	...
3	Medicine and extract manufactures.	1	5	1	...	10	8	...
4	Wholesale groceries	1	9	1	...	10	10	...
Total		5	47	7	...	...	...	...

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1	Brick and tile manufactures	2	41	...	2	10	...	10
2	Canning, vegetables	1	75	60	55	10	10	10
3	Clothing and tailoring	1	2	4	...	9	9	...
4	Printing and publishing	1	4	...	2	10	...	10
5	Seeds, shrubs and berries.	3	95	15	47	10	10	10
6	Wagon mfrs. and repairs	2	15	...	...	10	...	...
7	Wholesale produce	1	20	4	...	10	10	...
Total		11	252	83	106	...	...	...

—TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902			Marginal number.
Adult males	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employed.	Full force, full time.	Short time, reduced force.	Suspended.	
\$ 11,619	\$ 252	.....	\$ 11,871	aInc.	a 9.00	a 88	81	21	.....	1
17,640	.....	\$ 282	17,922	bInc.	b 5.00	b 42	30	10	12	2
600	.....	.....	600	.....	.....	.....	12	.....	40	3
5,500	.....	.....	5,500	.....	.....	.....	40	12	.....	4
6,000	144	.....	6,144	.....	.....	.....	26	26	.....	5
880	800	.....	1,180	.....	.....	.....	52	.....	.....	6
.....	500	.....	500	.....	.....	.....	51	.....	1	7
7,435	52	.....	7,487	bInc.	b 10.00	b 12	52	.....	.....	8
18,000	12,000	.....	30,000	Inc.	10.00	50	35	17	.....	9
2,996	768	.....	3,164	cInc.	c 12.00	.....	52	.....	.....	10
\$ 69,550	\$ 14,516	\$ 282	\$ 84,348	8	.....	142	.....	.....	.....	.....

"competition and better services."

COUNTY.

\$ 68,888	\$ 280	\$ 2,728	\$ 69,826	aInc.	a 7.00	a 140	36	12	4	1
7,910	.....	.....	7,910	aInc.	a 10.00	a 15	22	.....	80	2
1,500	.....	.....	1,500	.....	.....	.....	26	26	.....	3
454,279	138,828	16,450	604,052	.....	.....	.....	52	.....	.....	4
6,995	8,920	156	11,071	.....	.....	.....	52	.....	.....	5
4,125	.....	.....	4,125	bInc.	b 15.00	b 12	24	28	.....	6
2,410	.....	.....	2,410	.....	.....	.....	52	.....	.....	7
4,144	8,818	.....	12,460	.....	.....	.....	52	.....	.....	8
54,580	610	.....	55,190	.....	.....	.....	52	.....	.....	9
2,908	4,920	125	7,348	.....	.....	.....	52	.....	.....	10
78,538	405	c	78,988	.....	.....	.....	34	18	.....	11
40,772	81,856	.....	72,128	.....	.....	.....	52	.....	.....	12
23,104	1,900	.....	24,404	Inc.	10.00	.....	52	.....	.....	13
16,800	72	.....	16,372	Inc.	10.00	90	51	.....	1	14
218,400	5,900	1,912	225,612	.....	.....	.....	52	.....	.....	15
16,190	500	.....	16,690	.....	.....	.....	52	.....	.....	16
\$ 998,983	\$189,682	\$ 21,871	\$1,210,086	8	.....	197	.....	.....	.....	.....

union." c Not reported.

COUNTY.

\$ 5,500	.....	.....	\$ 5,500	.....	.....	.....	20	.....	32	1
1,508	\$ 1,284	.....	2,792	.....	.....	.....	40	9	8	2
1,680	820	.....	1,980	.....	.....	.....	32	20	.....	3
7,280	720	.....	8,000	.....	.....	.....	52	.....	.....	4
\$ 15,048	\$ 2,824	.....	\$ 18,272	.....	.....	.....	.....	.....	.....	.....

COUNTY.

\$ 7,000	.....	.....	\$ 7,000	Inc.	5.00	190	25	.....	27	1
1,800	\$ 700	\$ 240	2,740	.....	.....	.....	8	9	40	2
1,124	752	.....	1,876	.....	.....	.....	52	.....	.....	3
2,164	.....	105	2,269	Inc.	20.00	2	52	.....	.....	4
88,650	2,500	4,402	40,552	Inc.	10.00	75	80	22	.....	5
6,900	.....	.....	6,900	.....	.....	.....	40	12	.....	6
7,250	750	.....	8,000	.....	.....	.....	20	32	.....	7
\$ 59,878	\$ 4,702	\$ 4,747	\$ 69,327	4	.....	287	.....	.....	.....	.....

EMPLOYERS' STATISTICAL REPORT—

PALO ALTO

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employes for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Cigar manufactures.....	1	5	.....	.....	9	.....	.....
2	Clothing (retail).....	1	5	.....	.....	12	.....	.....
8	Marble and granite monuments.....	1	17	1	.....	10	10	.....
4	Real estate and hotel.....	1	4	2	.....	8	8	.....
5	Water supply.....	1	6	.....	.....	10	.....	.....
	Total.....	5	87	3	.....	.....	.....	.....

PLYMOUTH

1	Brick, sand and gravel.....	1	10	.....	.....	10	.....	.....
2	Clothing and tailoring.....	1	8	2	.....	10	10	.....
8	Dry goods and general merchandise.....	1	8	6	2	12	12	12
4	Hotels.....	1	5	10	.....	12	12	.....
5	Light, power and water supply.....	2	10	.....	.....	12	.....	.....
6	Milling, flour and cereals.....	1	8	.....	.....	12	.....	.....
7	Printing, binding and publishing.....	1	12	9	.....	10	10	.....
	Total.....	8	58	27	2	.....	.....	.....

POLK

1	Bakeries, wholesale and retail.....	4	45	5	1	10-11	11-12	10
2	Bicycles (retail and repairing).....	1	4	.....	.....	10	.....	.....
3	Books and stationery, retail.....	1	7	1	.....	10	9	.....
4	Bottling, mineral waters.....	1	4	1	.....	10	10	.....
5	Brick and tile manufactures.....	8	274	.....	2	8-9-10	.....	9
6	Bridge and structural iron mfrs.....	1	45	.....	.....	9	.....	.....
7	Broom manufactures.....	1	20	3	4	10	10	10
8	Carriage and vehicle manufactures.....	2	79	7	.....	9	9	.....
9	Casket manufactures.....	1	25	8	2	10	9	9
10	Cigar manufactures.....	5	58	11	2	8	9	9
11	Cigar manufactures.....	1	15	10	5	9	9	9
12	Clothing (retail).....	4	75	10	5	10	10	10
13	Coal mining.....	6	719	1	10	8	8	8
14	Commercial agencies.....	1	4	7	1	9	9	9
15	Contracting and building.....	2	200	.....	.....	8, 9	.....	.....
16	Confectionery manufactures.....	2	14	28	10	10	10	10
17	Crackers and cake bakeries.....	1	30	80	.....	10	10	.....
18	Dairies.....	1	10	.....	.....	12	.....	.....
19	Drugs, wholesale and manufactures.....	4	73	10	1	8, 10, 12	10	10
20	Dry goods and general merchandise.....	6	178	473	40	9	9	9
21	Electrical construction and mfrs.....	2	25	.....	.....	8	.....	.....
22	Engraving and electrotyping.....	1	15	1	.....	9	9	.....
23	Farm implements, agencies and manufactures.....	6	86	8	.....	10	9	.....
24	Foundries and machine shops.....	4	104	4	.....	9	9	.....
25	Florists.....	1	10	8	.....	12	10	.....
26	Furnace manufactures.....	2	67	2	2	9	8	9
27	Furniture manufactures.....	2	125	18	7	9, 10	9	10
28	Furniture (retail).....	1	21	1	.....	10	9	.....
29	Garment manufactures (women's).....	2	18	50	.....	9	9	.....
30	Glove and mitten manufactures.....	1	50	50	1	10	9	9
31	Groceries (retail).....	3	49	6	2	12	10	10
32	Groceries (wholesale).....	8	103	18	1	10	9	10
33	Hardware (wholesale and retail).....	2	23	3	.....	10	9	.....
34	Harness and saddlery mfrs.....	2	110	.....	.....	10	.....	.....
35	Hats and caps (jobbing, repairing).....	2	8	8	.....	9	9	.....
36	Hosiery manufactures.....	1	49	140	9	10	10	10
37	Hotels and restaurants.....	8	217	98	6	10, 12	10, 12	10

TABLE No. 1—CONTINUED.

COUNTRY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average number of weeks in operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employees.	Full force full time.	Short time reduced force.	Suspended.	
\$ 3,600			\$ 3,800				52			1
3,000			3,000	Inc.	10.00	5	52			2
7.60	\$ 120		7,880				40	12		3
2,700	885		3,585				52			4
2,260			2,260				32	20		5
\$ 19,520	\$ 1,005		\$ 20,525	1		5				

COUNTY.

\$ 2,500			\$ 2,500				20	20	12	1
1,82	\$ 650		2,470				50		2	2
4,800	2,322	\$ 812	7,484				52			3
1,40	1,920		3,660				52			4
5,400			5,400				52			5
6,492			6,492					12		6
7,242	2,414		9,656	Inc.	15.00	21	52			7
\$ 29,984	\$ 7,306	\$ 812	\$ 37,612	1		21				

COUNTY.

\$ 27,660	\$ 1,314	\$ 200	\$ 29,174	aInc.	a 20.00	a 24	52			1
1,200			1,200				26	26		2
4,125	425		4,450				52			3
2,000	194		2,194				80	22		4
141,981			141,981	bInc.	b 15.00	b 252	80	15		5
19,000			19,000	aInc.	a 10.00	a 45	37	12		6
9,800	1,008	300	10,908	aInc.	a 10.00	a 20	49			7
56,088	2,000		58,088	Inc.	12.50	16		20		8
10,125	1,125	825	11,975				50			9
81,653	2,242	450	84,345				48	4		10
7,500	4,000	750	12,250							11
58,059	4,678	658	63,395	cInc.	c 7.50	c 46	52			12
478,898	300	2,640	481,838	cInc.	c 10.00	c 68	40	12		13
2,940	2,580	192	5,712				52			14
114,380			114,380				40	12		15
7,591	5,490	1,740	14,781				52			16
21,300	6,200		27,500				40	12		17
5,400			5,400	dInc.	d 20.00	d 10	52			18
66,390	4,078	144	70,612				52			19
170,792	112,194	5,520	288,406	cInc.	c 10.00	c 287	52			20
16,560			16,560				52			21
10,000	400		10,400				52			22
61,881	4,498		65,877	Inc.	12.50	19	52			23
68,584	1,788		65,602	aInc.	a 10.00	a 72	52			24
4,780	1,320		6,100	cInc.	c 15.00	c 13	52			25
37,760	9.0	500	39,160	aInc.	a 10.00	a 13	86	16		26
67,427	4,301	1,234	72,952	aInc.	a 10.00	a 75	42	10		27
14,144	230		14,374				52			28
9,100	9.00		18,200	cInc.	c 10.00	c 60	40	10	2	29
28,000	15,000		41,600				45	7		30
28,700	2,900	234	31,834	Inc.	20.00	30	52			31
95,435	9,521	200	105,156				52			32
14,080	1,740		16,420	cInc.	c 7.50	c 10	51			33
46,678			46,678				51			34
5,042	900		5,942	cInc.	c 10.00	c 3	40	12		35
21,180	7,744	1,500	33,424				51	1		36
79,638	20,180	338	100,151	aInc.	a 10.00	a 45	52			37

EMPLOYERS' STATISTICAL REPORT

POLK COUNTY—

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
38	Ice manufactures and distributors..	2	38	.....	.....	12	.....	.....
39	Incubator manufactures	3	76	.....	.....	9	9	.....
40	Insurance (fire)	6	44	20	.....	8	8	.....
41	Insurance (life)	6	58	10	2	8	8	8
42	Laundries	7	58	116	.....	9	9	.....
43	Light and water supply	2	185	2	.....	9, 10	9	.....
44	Linseed oil and cake manufactures.	1	25	.....	.....	10, 12	.....	.....
45	Lumber (wholesale and retail)	2	80	.....	6	9	.....	9
46	Medicine mfrs. (proprietary)	2	73	123	.....	9	9	.....
47	Metal mfrs. (sheet and grill)	8	19	1	.....	9	9	.....
48	Milling, flour and grain	4	45	6	.....	10	10	.....
49	Monuments (metal and granite) mfrs.	3	25	2	.....	9	9	.....
50	Packing (beef and pork)	1	100	.....	.....	9	.....	.....
51	Paper box manufactures	1	8	4	10	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$
52	Pickle and condiment manufactures	2	26	16	.....	10	10	.....
53	Plumbing and heating	8	33	.....	.....	8	.....	.....
54	Printing and publishing	11	500	101	e 61	8, 9, 10	9, 10	e 2, 4, 10
55	Sash, doors and fixture mfrs.	2	74	.....	.....	9	.....	.....
56	Soap manufactures	2	16	2	.....	10	10	.....
57	Street railway transportation	1	362	.....	2	10	.....	10
58	Suspender manufactures	1	.....	20	.....	.....	9	.....
59	Telephone exchange (local)	1	89	59	.....	9	9	.....
60	Tent and awning manufactures	1	28	12	.....	10	10	.....
61	Transfer, drayage and storage	6	128	8	.....	10	9	.....
62	Trunk and bag manufactures	1	6	.....	.....	10	.....	.....
63	Typewriter manufactures	1	95	10	.....	10	10	.....
64	Wall paper, painting and decorating	4	150	19	4	8	9	10
65	Washing machine manufactures	1	12	.....	.....	10	.....	.....
66	Wholesale coffee and spice mfgs.	1	25	11	.....	10	10	.....
67	Wholesale and retail crockery	1	20	5	.....	10	10	.....
68	Wholesale fruit and produce	2	45	1	.....	10	9	.....
69	Wholesale furnishings and notions.	2	18	1	.....	10	9	.....
70	Wholesale liquors	1	104	1	.....	8	8	.....
71	Wholesale millinery	1	50	100	.....	9	9	.....
72	Wholesale oils and grease	1	28	.....	.....	.....	.....	.....
73	Wholesale paper and woodenware	1	21	1	.....	10	9	.....
74	Wholesale and retail shoes	3	43	6	.....	10	10	.....
75	Wind mills, tanks and scale mfgs. .	4	111	8	.....	9-10	9	.....
76	Woolen goods manufactures	1	65	135	.....	9 $\frac{1}{2}$	9 $\frac{1}{2}$	.....
Total		195	5,796	1,819	196	.....	.....	.....

a Cause, "demand for union." b Causes, "demand for and by labor"; "better
 g Cause, "increased cost of living." h Cause, "employees struck and won out."
 tabishment only. e "55 are are carrier boys who work 2 to 4 hours per day"

—TABLE NO. 1—CONTINUED.

CONTINUED.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employees.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 10,100			\$ 10,100	Inc.	10.00	33	30	10	12	38
25,262	\$ 2,400		27,662	Inc.	5.00	15	22	18	12	39
40,902	10,937		51,839				52			40
86,940	16,464	\$ 360	103,744	c Inc.	c 12.00	c 37	52			41
86,115	82,614		68,729				52			42
96,000	2,820		98,820	c Inc.	c 15.00	c 125	52			43
14,028			14,028	g Inc.	g 15.00	g 25	30	23		44
52,750		1,360	54,100	c Inc.	c 17.50	c 20	52			45
38,450	26,330		64,780				52			46
12,604	320		12,924				40	12		47
24,690	1,556		26,240				82	20		48
11,543	1,020		12,563	c Inc.	c 10.00	c 16	40	10	2	49
65,000			65,000				40	12		50
3,502	787	1,852	5,881				50	1	1	51
17,433	8,325		20,758	b Inc.	b 5.00	b 20	52			52
23,226			23,226	a Inc.	a 7.50	a 33	46	6		53
366,584	44,396	4,595	415,515	b Inc.	b 10.00	b 123	52			54
40,686			40,686	a Inc.	a 10.00	a 60	36	12	4	55
8,425	730	126	9,281				48	4		56
202,562			202,562	c Inc.	c 10.00	c 250	52			57
	2,451		2,451				48		4	58
22,904	15,707		38,611	h Inc.	h 10.00	h 98	49	8		59
5,500	1,700		7,200	c Inc.	c 10.00	c 7	43	9		60
66,968	1,540		68,508	Inc.	10.00	14	40	12		61
3,400			3,400	g Inc.	g 10.00	g 5	52			62
30,824	4,600		35,424				35	17		63
41,644	3,707	823	46,174	a Inc.	a 10.00	a 101	32	20		64
7,480			7,480				52			65
23,900	2,500		26,400				52			66
17,085	1,225		18,310				52			67
29,600	624		30,224				52			68
14,000	400		14,400				52			69
81,120	1,500		82,620				52			70
57,000	8,000		65,000	Inc.	10.00	50	16	36		71
26,167			26,167				52			72
13,500	500		14,000				52			73
21,420	2,032		23,452	a Inc.	c 7.50	c 18	52			74
46,029	1,900		47,929	i Inc.	i 10.00	i 85	52			75
30,000	41,400		71,400				52			76
\$3,535,689	\$462,665	\$ 25,669	\$4,023,023	67		2,283				

times." c Cause, "better business." d Cause, "scarcity of competent men."

i Cause, "shortening of hours from 10 to 9 per day without reduction of pay," in one es-

EMPLOYERS STATISTICAL REPORT

POTTAWATTAMIE

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employes for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Basket and package manufactures..	1	2	6	4	10	6	9
2	Brick and tile manufactures.....	2	25			10		
3	Carriage and buggy manufactures..	1	71	4		10	10	
4	Cigar manufactures.....	4	45		8	8-9		8
5	Commercial agencies.....	1	5			10		
6	Confectionery manufactures.....	1	116	116	8	10	10	10
7	Creamery supply manufactures.....	1	9			10		
8	Farm implement and tool mfrs.....	2	82		8	10		10
9	Farm implement sales agencies.....	8	97	20		9	9	
10	Fence manufactures (wire).....	1	24	1		10	10	
11	Hardware (wholesale and retail)...	2	37	1		10	9	
12	Hotels.....	2	40	18		12	12	
13	Ice, wood and coal dealers.....	1	15			10		
14	Lamp and mantel manufactures.....	1	27	4		10	10	
15	Laundries.....	8	22	77	1	10	10	10
16	Light and water supply.....	4	48	1		10-12	9	
17	Lumber and planing mill.....	1	10			9		
18	Milling, flour and cereals.....	2	18			10		
19	Plumbing, heating and gas fitting..	8	88	1		8	8	
20	Printing and publishing.....	2	73	5		8-9	9	
21	Roofing.....	1	10			8		
22	Scale and elevator manufactures....	1	45	1		10	10	
23	Structural iron foundry.....	1	25			10		
24	Syrups and preserves manufactures	1	24	4		10	10	
25	Tailoring and clothing.....	1	6	1		12	12	
26	Telephone exchange (local).....	1	27	8		10	10	
27	Wholesale drugs.....	1	21	1		10	8	
28	Wholesale groceries.....	2	68	2		10	10	
29	Wholesale vehicles and wagons....	1	21	4		10	9	
Total.....		53	1041	275	19			

a Cause, "scarcity of labor." b "Moulders demanded it." c Cause, "in unions." f Cause, "imperial demand from the men."

POWESHIEK

1	Brick and tile manufactures.....	2	17		1	10		10
2	Carriage and wagon manufactures..	1	165	10		10	10	
3	Contractors and builders.....	2	35			10		
4	Dry goods and general merchandise	3	8	9		11	10	
5	Glove and mitten manufactures.....	1	41	40	3	10	10	10
6	Hardware and implements.....	1	8			10		
7	Hotels.....	1	3	5		12	12	
8	Laundries.....	1	2	8		10	10	
9	Meats and exchange of stock.....	1	8			11		
10	Printing, binding and publishing....	1	11	6		10	10	
Total.....		14	298	77	4			

a Cause, "merit." b Cause, "scarcity of labor and demand by it." c Cook

SAC

1	Brick and tile manufactures.....	1	6			10		
2	Canning vegetables.....	1	51	75	25	10	10	10
3	Dry goods and general merchandise	1	2	3		10	10	
4	Farming and stock raising.....	1	100	2		10	10	
5	Wholesale produce.....	1	18			10		
Total.....		5	176	80	25			

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 700	\$ 650	\$ 70	\$ 1,420				12	40		1
7,424			7,424	a Inc.	a 10.00	a 25	25		27	2
26,190	1,316		27,506	a Inc.	a 5.00	a 86	26	27		3
22,190		1,066	23,256				40	12		4
2,500			2,500				45	7		5
48,800	25,000	1,700	75,500				52			6
5,200			5,200				40		12	7
89,766		245	90,011	b Inc.	b 10.00	b 9	20	25	7	8
92,813	10,784		103,597	c Inc.	c 2.00	c 4	52			9
20,230	520		20,750				52			10
27,666	450		28,116	d Inc.	d 10.00	d 15	52			11
18,300	6,024		24,324				52			12
3,890			3,890				52			13
21,090	1,040		22,130				40		12	14
15,840	18,430	230	34,500				52			15
87,143	520		87,663				52			16
4,800			4,800				30	16	6	17
12,750			12,750				40	9	8	18
26,780	480		27,260	e Inc.	e .01	e 12	52	12		19
51,508	984		52,492	e Inc.	e 12.00	f 10	52			20
6,000			6,000	f Inc.			52	12		21
25,840	890		26,730				52			22
15,000			15,000				52			23
19,370	1,490		20,860				52			24
\$ 8,646	\$ 80		\$ 8,726				26			25
6,660	1,680		8,340				52	26		26
16,000	500		16,500				52			27
55,000	600		55,600				52			28
20,806	2,207		23,013				40	12		29
\$ 658,875	\$ 73,275	\$ 8,411	\$ 730,061	8		111				

increased work given men."

d Cause, "increased business."

e Cause, "demand of

COUNTY.

\$ 5,075	\$ 100	\$ 5,175				26		26	1
112,420	5,200	117,620	Inc. a	a 10.00	a 40	52			2
14,075		14,075	Inc. b	b 12.00	b 85	52	12	4	3
8,900	8,450	7,350	Inc.	20.00	8	52			4
23,519	12,187	35,706				52			5
8,500		8,500				30	22		6
482	1,178	1,660	Inc. c	c	c 5	52			7
930	1,450	2,380	Inc. a	a 12.00	a 2	52			8
4,160		4,160				52			9
8,900	1,750	10,650				52			10
\$ 171,401	\$ 25,215	\$ 840	\$ 197,456	7		90			

raised \$1.03 per week, waitresses, 53 cents. Cause, "better business, more work."

COUNTY.

\$ 500	\$ 1,500	\$ 500	\$ 8,500			10		42	1
1,500	1,690		2,790			52	1	47	2
25,000	8,600		33,600			52			3
4,067			4,067	Inc.	15.00	10	15	37	4
\$ 82,147	\$ 6,780	\$ 500	\$ 89,427	1		10			5

EMPLOYERS' STATISTICAL REPORT—
SCOTT

Mar- ginal num- ber.	Industry or Kind of Business.	Num- ber estab- lish- ments report- ing.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult fe- males.	Child- ren under 16.	Adult males.	Adult fe- males.	Child- ren under 16.
1	Axles and steel car manufactures ..	1	349	1	...	10-12	8	...
2	Bakeries (wholesale and retail) ..	1	2	1	...	10	10	...
3	Brewing and malting	2	94	1	...	8-10	8	...
4	Brick and tile manufactures	2	40	...	...	10	...	...
5	Broom manufactures	1	42	20	15	10	10	10
6	Butter tub and barrel manufactures ..	1	7	...	...	10	...	...
7	Button manufactures (pearl)	2	110	174	45	10	10	10
8	Cann manufactures (tin)	1	80	85	55	10	10	10
9	Carriage manufactures (baby)	1	25	1	...	10	10	...
10	Carriage and buggy manufactures ..	2	33	2	...	10	9	...
11	Carpet loom manufactures	1	6	8	...	10	8	...
12	Cigar manufactures	2	60	120	...	10	10	...
13	Cigar manufactures	3	22	100	...	8	10	...
14	Cigar box manufactures	1	8	23	...	9	9	...
15	Cigar molds and supply mfrs.	1	23	1	2	10	9	10
16	Coal mining	2	61	...	...	8	...	...
17	Commercial agency	1	8	1	...	9	9	...
18	Confectionery manufactures	2	14	35	20	10	10	10
19	Contracting and building	2	142	...	...	8-10	...	...
20	Crackers and cake mfrs.	2	35	50	5	10	10	10
21	Crockery and glassware (wholesale and retail)	2	22	6	...	10	9	...
22	Dry goods, clothing and merchandise ..	4	168	213	32	10	10	10
23	Drugs (retail)	1	9	2	...	10	8	...
24	Foundries and machine shops	2	97	...	...	10	...	...
25	Fuel, feed and building material	2	13	...	...	10	...	...
26	Furniture and carpets (retail)	3	64	7	...	10	9	...
27	Grain and commission	2	47	1	...	10	8	...
28	Heavy hardware (wholesale and retail)	4	52	4	...	10	9	...
29	Hotels	2	49	51	5	10	10	10
30	Ice manufactures	1	27	...	...	10	...	...
31	Insurance (life)	2	21	1	...	8	7	...
32	Light and water supply	3	135	2	...	8-10-12	8	...
33	Liveries	1	8	...	...	...	...	...
34	Lumber and planing mills	8	200	2	...	10-11	8	...
35	Macaroni manufactures	1	30	53	4	10	10	10
36	Marble and granite monuments	1	11	1	...	10	8	...
37	Milling (flour and cereals)	2	23	1	...	10-11	8	...
38	Mineral water and beer bottling	1	15	...	...	10	...	...
39	Nurseries, seed and shrubs	2	25	...	...	10	...	...
40	Packing, pork and beef	3	94	3	...	10	9	...
41	Paint manufactures	1	40	10	...	10	10	...
42	Paper box and bag manufactures	2	8	12	...	10	9	...
43	Pickles and vinegar manufactures	2	30	10	...	10	9	...
44	Printing, binding and publishing	6	164	32	11	8-9	9	9
45	Pumps and well supply mfrs.	1	60	...	...	10	...	...
46	Plumbing and heating	1	47	3	...	9	8	...
47	Saddlery and harness manufactures ..	2	38	...	...	10	...	...
48	Sash, doors and fixture mfrs.	3	114	...	...	...	...	...
49	Shirt and overalls manufactures	2	21	91	13	8-9-10	8-9	8-9
50	Shoes (retail)	1	7	1	...	10	10	...
51	Snap manufactures	1	7	...	...	10	...	...
52	Street railway transportation	1	332	...	...	11	...	...
53	Syrup and sugar manufactures	1	290	2	58	8-10-12	10	12
54	Theatrical amusements	1	4	1	...	8	8	...
55	Washing machine manufactures	3	134	2	34	10	8	10
56	Wholesale coffee and spices	1	27	14	...	10	9	...
57	Wholesale dry goods	1	23	...	...	9	...	...
58	Wholesale fruits and produce	1	19	2	...	10	9	...
59	Wholesale groceries	2	35	2	...	10	9	...
60	Wheel manufactures (metal)	1	300	...	25	10	...	10
61	Wooden goods manufactures	1	24	45	...	10	10	...
Total		108	4,038	1,144	324			

a Cause, "voluntary." b Separate wage accounts for males and females not reported.
 account of other firms doing likewise." c Cause, "demand for coal and miners
 A Cause, "increased cost of living" and better business. d One company reduced hours
 very satisfactory. j Ten boys are carriers who work about 2 hours per day. k Cause,

TABLE No. 1—CONTINUED.
COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes	Full force full time.	Short time, reduced force.	Suspended.	
\$ 175,000	\$ 520		\$ 175,520	Inc. a	a10.00	a 21	52			1
12,000	400		12,400	Inc. a	a10.00	a 30	52			2
49,138	420		49,558	Inc. a	a10.00	a 30	52			3
11,000			11,000				26		26	4
21,246	4,214	2,108	27,568				50		2	5
3,000			3,000				40	12		6
51,700	31,000	6,150	88,850	Inc. a	a12.00	a 85	40	12		7
44,518	12,246	10,155	66,914				52			8
17,000	500		17,500	Inc. a	a10.00	a 26	26	26		9
18,400	800		19,200				36	16		10
8,292	798		4,078				52			11
b			68,828				50		2	12
11,195	28,105		37,300	Inc. c	c12.00	c 104	52			13
6,000	5,500		11,500				52			14
7,500	300	800	8,196	dInc. d	d 10.00	d 20	52			15
15,896			15,896	eInc. e	e 10.00	e 61	20	25	7	16
4,378	864		4,742				52			17
7,670	6,100	8,000	16,770	fInc. f	f10.00	f 120	52			18
71,787			71,787	fInc. f	f10.00	f 120	26	26		19
35,784	10,240	1,000	47,024				52			20
14,576	2,832		17,408				52			21
84,989	61,512	4,916	151,417	Inc.	5.00	60	52			22
6,220	720		6,940				52			23
48,573			48,573	fInc. f	f10.00	f 87	52			24
6,800			6,800	Inc.	10.00	6	40	12		25
96,491	2,990		99,481	aInc. a	a15.00	a 12	52			26
27,574	812		27,696	gInc. g	g10.00	g 15	40	12		27
40,295	1,845		42,140				52			28
14,496	6,556	490	21,772				52			29
8,370			8,370				28	24		30
26,188	416		27,349				52			31
50,550	1,200		52,050	hInc. h	h15.00	h 73	52			32
4,300			4,300	fInc. f	f10.00	f 8	52			33
58,638	787		59,425	aInc. a	a10.00	a 175	26	26		34
8,500	10,000		18,500				52			35
7,300	300		7,600				52			36
12,514	600		13,114	hInc. h	h10.00	h 10	52			37
4,500			4,500				52			38
13,000			13,000				30	22		39
45,400	895		46,295	hInc. h	h20.00	h 32	40	12		40
20,000	3,000		23,000				52			41
8,970	3,180		7,130	aInc. a	a10.00	a 6	52			42
23,178	2,170		25,348	Inc.	12.50	26	50	2		43
118,011	11,342	1,482	129,835	hInc. h	h10.00	h 25	52			44
34,000			34,000				48	4		45
20,000	900		21,500				40	12		46
23,370			23,370				52			47
53,779			53,779	fInc. f	f10.00	f 62	40	12		48
15,100	16,800	2,100	33,900				30	22		49
7,060	812		7,472				52			50
1,480			1,480				52			51
184,778			184,778	hInc. h	h 8.50	h 200	52			52
207,985	624	12,394	220,983				40	10	2	53
2,700	300		3,000	Inc.	15.00	4	40		12	54
60,575	812	7,706	68,583				40	10	2	55
81,437	3,300		84,737	kInc. k	k15.00	k 40	52			56
22,356			22,356				52			57
17,374	1,404		18,778				52			58
30,250	650		30,900				52			59
92,762			92,762				52			60
12,719	11,680		24,399				52			61
\$2,096,951	\$246,574	\$ 57,731	\$2,497,084	34		1,808				

c Cause, "scarcity of help, and cigarmakers union demanded it." d Cause, "compelled to on union." e Cause, "demanded by aid for labor." f Cause, "merit and seniority." g Cause, "general interest working for firm."

EMPLOYERS STATISTICAL REPORT—

SIOUX

Mar- gins num- ber.	Industry or Kind of Business.	Num- ber estab- lish- ments report- ing.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult fe- males.	Chil- dren under 16.	Adult males.	Adult fe- males.	Chil- dren under 16.
1	Brick and tile manufactures	1	8	.....	.....	10	.....	.....
2	Milling, cereals and electric power.	3	24	.....	.....	10-12	.....	.....
	Total	4	32	.....	.....	.....	.....	.....

STORY

1	Brick and tile manufactures	1	8	.....	1	10	.....	8
2	Cigar manufactures	1	1	2	.....	8	8	.....
3	Light and water supply	1	6	.....	.....	12	.....	.....
4	Restaurants	1	7	1	.....	12	8	.....
	Total	4	22	8	1	.....	.....	.....

a Cause, "condition of business warranted an increase."

TAMA

1	Brick and tile manufactures	4	47	.....	1	10	.....	10
2	Hotels	1	5	5	.....	12	12	.....
	Total	5	52	5	1	.....	.....	.....

a Cause, "all wages were higher."

TAYLOR

1	Brick and tile manufactures	1	12	.....	.....	9	.....	.....
2	Coal mining	1	20	.....	.....	8	.....	.....
3	Contracting and building	1	4	.....	.....	10	.....	.....
4	Laundries	1	3	2	.....	10	8	.....
	Total	4	39	2	.....	.....	.....	.....

a Cause, "Miners' union."

UNION

1	Brick and tile manufactures	1	29	.....	.....	10	.....	.....
2	Cigar manufactures	2	10	.....	1	8	.....	8
3	Hotels and restaurants	3	18	26	.....	12	12	.....
4	Light and water supply	2	10	.....	.....	10	.....	.....
5	Printing and publishing	2	17	6	.....	10	10	.....
6	Telephone exchange (local)	1	3	9	.....	10	9	.....
	Total	11	87	41	1	.....	.....	.....

a Cause, "men asked it."

b Cause, "increase in cost of living."

c Cause,

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employed.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 1,800			\$ 1,800	.....	.....	.....	18	.....	84	1
13,320			13,320	.....	.....	.....	52	.....	.....	2
\$ 14,620			\$ 14,620	.....	.....	.....	.....	.....	.....	.....

COUNTY.

\$ 2,400	.....	\$ 50	\$ 2,450	a Inc.	a 8.00	a	32	4	16	1
382	\$ 780	.....	1,612	.....	.....	.....	52	.....	.....	2
3,062	.....	.....	3,062	Inc.	25.00	1	52	.....	.....	3
2,520	300	.....	2,820	.....	.....	.....	52	.....	.....	4
\$ 8,804	\$ 1,080	\$ 50	\$ 9,884	2	.....	9	.....	.....	.....	.....

COUNTY.

\$ 27,831	.....	\$ 118	\$ 27,449	a Inc.	a 10.00	a 8	30	16	6	1
1,200	\$ 6.0	.....	1,800	.....	.....	.....	52	.....	.....	2
\$ 28,531	\$ 600	\$ 118	\$ 29,249	1	.....	8	.....	.....	.....	.....

COUNTY.

\$ 2,500	.....	.....	\$ 2,500	.....	.....	.....	28	.....	24	1
7,222	.....	.....	7,222	a Inc.	a 5.00	a 20	24	.....	23	2
1,872	.....	.....	1,872	.....	.....	.....	40	12	.....	3
1,850	\$ 800	.....	1,710	.....	.....	.....	52	.....	.....	4
\$ 12,944	\$ 880	.....	\$ 13,804	1	.....	20	.....	.....	.....	.....

COUNTY.

\$ 9,623	.....	.....	\$ 9,623	a Inc.	a 10.00	a 29	33	.....	19	1
4,925	.....	\$ 104	5,029	.....	.....	.....	52	.....	.....	2
5,510	\$ 5,318	.....	10,828	.....	.....	.....	52	.....	.....	3
6,036	.....	.....	6,036	b Inc.	b 10.00	b 17	52	.....	.....	4
8,000	1,850	.....	9,350	c Inc.	c 10.00	c 12	52	.....	.....	5
2,640	1,080	.....	3,720	c Inc.	c 10.00	c 12	52	.....	.....	6
\$ 36,784	\$ 7,748	\$ 104	\$ 44,596	4	.....	58	.....	.....	.....	.....

"enlargement of plant."

EMPLOYERS STATISTICAL REPORT—

VAN BUREN

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Cigar manufactures.....	1	18	6	.....	8	9	.....
2	Coal mining.....	1	4	.....	.....	8	.....	.....
3	Dry goods and general merchandise.	1	1	1	.....	10	8	.....
4	Candle manufactures (tool).....	1	5	.....	.....	10	.....	.....
5	Lumber and planing mill.....	1	10	.....	.....	10	.....	.....
6	Woolen goods manufactures.....	1	82	42	.....	10	10	.....
	Total.....	6	70	49	.....	.....	.....	.....

a Cause, "strike."

b Cause, "men more experienced."

WAPELLO

1	Boiler manufactures.....	1	14	.....	.....	10	.....	.....
2	Box car loader manufactures.....	1	38	1	1	10	9	10
3	Brick and tile manufactures.....	1	14	.....	.....	10	.....	.....
4	Bridge and structural iron mfs.....	1	30	.....	.....	10	.....	.....
5	Cigar manufactures.....	7	69	141	5	8-9-10	9-10	10
6	Clothing and men's furnishings.....	2	15	1	.....	10	10	.....
7	Coal mining.....	8	550	.....	.....	8	.....	.....
8	Confectionery man. factories.....	1	37	23	.....	10	10	.....
9	Dry goods and general merchandise.....	3	30	88	4	10	9	10
10	Farm implement manufactures.....	3	438	9	19	9-10	9	10
11	Foundries and machine shops.....	2	123	7	.....	9-10	9	.....
12	Furniture and carpets.....	1	15	3	.....	10	9	.....
13	Hardware specialties manufactures.....	1	8	4	2	10	10	10
14	Hotels.....	2	25	23	.....	10	9	.....
15	Ice manufactures and delivery.....	2	17	.....	.....	8-10-12	.....	.....
16	Laundries.....	2	23	55	.....	10	9	.....
17	Light power and water supply.....	3	84	.....	.....	9-10-12	.....	.....
18	Livery, drayage and transfer.....	1	40	.....	.....	10	.....	.....
19	Mechanics' tools manufactures.....	1	19	1	.....	10	10	.....
20	Packing, pork and provisions.....	1	1,115	.....	85	10	.....	10
21	Pickles and vinegar manufactures.....	1	5	4	.....	10	10	.....
22	Printing, binding and publishing.....	2	89	6	f 26	8-9	9	f 2-9
23	Shirts and overall manufactures.....	1	1	9	.....	9	9	.....
24	Wholesale butter and eggs.....	3	21	20	.....	10	9	.....
25	Wholesale drugs and stationery.....	1	27	2	8	10	9	10
26	Wholesale groceries.....	2	41	3	.....	10	8	.....
27	Wholesale hardware.....	2	85	3	.....	10	9	.....
28	Wholesale liquors.....	2	13	.....	.....	10	.....	.....
	Total.....	60	2,881	353	145	.....	.....	.....

a Cause, "supply and demand, and increased efficiency."

b Separate wage accounts

d Cause, "necessary to keep competent help." e Cause, "republican prosperity." f 25 cost of living."

WARREN

1	Coal mining.....	1	5	.....	.....	8	.....	.....
2	Dry goods and general merchandise.....	1	8	4	.....	12	9	.....
	Total.....	2	8	4	.....	.....	.....	.....

a Cause, "demand for coal, and miners work better for more wages."

b Cause,

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902. Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For num-employees.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 5,748	\$ 1,344	.....	\$ 7,092	a Inc.	b 5.00	a 22	39	11	2	1
1,170	.....	.....	1,170	.....	.....	.....	18	.....	32	2
1,104	104	.....	1,208	.....	.....	.....	52	.....	.....	3
1,980	.....	.....	1,980	b Inc.	b 10.00	b 5	44	.....	8	4
1,000	.....	.....	1,000	.....	.....	.....	8	.....	44	5
13,561	6,781	.....	20,342	.....	.....	.....	52	20	.....	6
\$ 23,563	\$ 8,229	.....	\$ 31,792	2	.....	27	.....	.....	.....	.....

COUNTY.

\$ 8,000	.....	.....	\$ 8,000	.....	.....	.....	52	.....	.....	1
19,400	\$ 200	\$ 132	19,732	.....	.....	.....	52	.....	.....	2
3,900	.....	.....	3,900	Inc.	7.50	9	26	2	24	3
13,000	.....	.....	13,000	.....	.....	.....	52	.....	.....	4
47,777	44,538	1,000	93,315	a Inc.	a 7.50	a 60	48	2	2	5
10,290	490	.....	10,770	a Inc.	a 15.00	a 12	52	.....	.....	6
270,000	.....	.....	270,000	.....	.....	.....	40	12	.....	7
b	b	.....	26,754	.....	.....	.....	50	2	.....	8
17,105	12,374	1,254	30,733	Inc.	5.00	34	52	.....	.....	9
125,500	3,000	5,062	131,562	.....	.....	.....	52	.....	.....	10
88,100	2,500	.....	90,600	c Inc.	c 10.00	c 120	52	.....	.....	11
9,000	1,000	.....	10,000	a Inc.	a 10.00	a 15	52	.....	.....	12
1,700	1,150	900	3,750	.....	.....	.....	48	.....	4	13
5,407	8,288	.....	13,695	.....	.....	.....	52	.....	.....	14
7,500	.....	.....	7,500	.....	.....	.....	26	26	.....	15
14,960	13,895	.....	28,855	.....	.....	.....	50	2	.....	16
37,132	.....	.....	37,132	.....	.....	.....	52	.....	.....	17
18,67	.....	.....	18,67	d Inc.	d 5.00	d 9	52	.....	.....	18
4,590	.....	.....	4,590	.....	.....	.....	52	.....	.....	19
849,738	.....	16,507	866,245	.....	.....	.....	52	.....	36	20
2,400	480	.....	2,880	.....	.....	.....	26	.....	.....	21
25,27	1,918	f 156	27,343	e Inc.	e 10.00	e 85	52	20	6	22
300	3,020	.....	3,320	.....	.....	.....	52	.....	.....	23
8,903	6,000	.....	14,903	.....	.....	.....	52	40	.....	24
18,550	900	620	20,070	.....	.....	.....	52	.....	.....	25
31,740	1,300	.....	33,040	.....	.....	.....	52	.....	.....	26
26,000	1,480	.....	27,480	.....	.....	.....	52	.....	.....	27
9,144	.....	.....	9,144	g Inc.	g 12.00	g 4	52	.....	.....	28
\$ 1,172,774	\$ 97,52	\$ 23,021	\$ 1,320,070	13	.....	298	.....	.....	.....	.....

for males and females not reported. c Cause, "on request of employes through unions." are carrier boys who work about 2 hours per day; no wage account reported. g Cause, "increased

COUNTY.

\$ 1,500	.....	.....	\$ 1,500	a Inc.	a 10.00	a 5	25	.....	27	1
1,700	\$ 960	.....	2,660	b Inc.	b 5.00	b 7	52	.....	.....	2
3,200	\$ 960	.....	4,160	2	.....	12	.....	.....	.....	.....

"good business."

EMPLOYERS STATISTICAL REPORT

WASHINGTON

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employes for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16	Adult males.	Adult females.	Children under 16
1	Bank and store fixtures mfrs.	1	5	.....	.....	10	.....	.....
2	Brick and tile manufactures	1	13	.....	4	10	.....	10
3	Carriage and buggy manufactures	2	16	.....	.....	10	.....	.....
4	Dry goods and general merchandise	1	2	10	.....	10	9	.....
5	Glove and mitten manufactures	2	5	81	2	10	10	10
6	Hotels	1	7	10	.....	12	10	.....
7	Stone quarrying	1	7	.....	.....	10	.....	.....
Total		9	55	51	6	..	.....	.....

a Raised men from \$1.25 to \$1.50 per day, expected more and better work and got it.

WAYNE

1	Brick and tile manufactures	1	14	.....	.....	10	.....	.....
2	Broom manufactures	1	4	.....	1	10	.....	10
3	Coal mining	1	62	.....	.....	8	.....	.....
4	Garden plow manufactures	1	4	.....	.....	10	.....	.....
5	Hardware and implement dealer..	1	23	.....	1	12	.....	12
6	Lighting plants	1	2	.....	.....	9	.....	.....
Total		6	109	.....	2	.....	.....	.....

WEBSTER

1	Boot and shoe manufactures	1	100	50	.....	10	.....	.....
2	Brick and tile manufactures	4	104	.....	2	9-10	.....	10
3	Cigar manufactures	2	6	.....	1	8	.....	9
4	Coal mining	2	76	.....	.....	8	.....	.....
5	Cooperage, butter tubs and barrel manufactures	1	80	2	8	10	10	10
6	Dry goods and general merchandise	2	12	14	.....	14	10	.....
7	Florist and cut flowers	1	4	.....	.....	10	.....	.....
8	Foundry and machine shop	1	12	.....	.....	10	.....	.....
9	Hardware (retail)	1	25	1	.....	10	8	.....
10	Laundries	1	6	21	.....	10	9	.....
11	Light and power supply	1	18	1	.....	10	10	.....
12	Milling, feed, flour and cereals	1	75	76	.....	10-12	10	.....
13	Paint manufactures	1	20	1	.....	10	9	.....
14	Plaster and stucco manufactures ..	3	45	.....	.....	8-10	.....	.....
15	Plumbing and heating	1	9	1	.....	9	9	.....
16	Printing and publishing	3	29	7	4	10	94	94
17	Sash, doors and fixture mfrs.	1	5	.....	.....	10	.....	.....
18	Shirts, overalls and garment mfrs..	2	12	47	1	10	10	10
19	Stoneware manufactures	1	48	.....	1	10	.....	10
20	Transfer and storage	1	10	1	.....	10	9	.....
21	Wholesale and retail farm implements	2	81	1	.....	10	10	.....
22	Wholesale fruits and produce.	2	15	4	.....	10	10	.....
23	Wholesale groceries	1	17	2	.....	10	10	.....
Total		38	1,154	229	12	.....	.....	.....

a Separate wage accounts for males and females not reported. b Cause, "demand
c Wage account for one firm only employing 60 men. f Three months only.

WINNEBAGO

1	Banking and real estate	1	8	.....	.....	9	.....	.....
2	Canning (vegetables)	2	55	55	15	10	10	10
3	Farm implements	1	8	.....	.....	10	.....	.....
4	Light, power and water supply	4	10	.....	.....	12	.....	.....
Total		8	71	55	15	.....	.....	.....

EMPLOYERS STATISTICAL REPORT—

WINNECHEIK

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males.	Adult females.	Children under 16.	Adult males.	Adult females.	Children under 16.
1	Cigar manufactures.....	1	5	.....	.....	9	.....	.....
2	Clothing and tailoring.....	1	7	.....	.....	10	.....	.....
3	Dry goods and general merchandise.....	3	14	18	.....	10	10	.....
4	Hotels.....	2	5	14	.....	12	12	.....
5	Printing, binding and publishing.....	1	18	6	.....	10	10	.....
6	Sash, door and fixture manufactures.....	1	24	.....	.....	10	.....	.....
7	Wagon and truck manufactures.....	1	17	.....	.....	10	.....	.....
Total		10	90	88	.....	.....	.....	.....

WOODBURY

1	Bakeries, bread and cake	3	36	5	.....	10	10	.....
2	Brewing and malting.....	1	25	.....	.....	10	.....	.....
3	Brick and tile manufactures.....	4	237	.....	2	10	.....	10
4	Broom manufactures.....	1	8	c	1	8	c	8
5	Cider, vinegar and extract mfrs.....	2	13	4	.....	9	8	.....
6	Cigar manufactures and dealers.....	5	73	.....	.....	8	.....	.....
7	Clothing (retail).....	2	22	1	.....	10	10	.....
8	Commercial agencies.....	2	7	7	.....	8	8	.....
9	Contractors and builders.....	2	48	.....	.....	9-10	.....	.....
10	Cooperage, kegs and barrels.....	1	4	.....	.....	10	.....	.....
11	Cracker and confectionery mfrs.....	2	104	85	1	10	10	10
12	Dry goods and general mfrs.....	4	122	147	26	10	10	10
13	Farm implement and grain dealers.....	1	9	.....	.....	10	.....	.....
14	Farm implement manufactures.....	1	12	.....	.....	10	.....	.....
15	Furniture dealers (wholesale, retail).....	2	29	6	.....	10	10	.....
16	Harness and saddlery manufactures.....	4	43	1	4	10	10	10
17	Hardware (wholesale and retail).....	5	114	15	1	9-10	9	10
18	Hides, wool and fur dealers.....	1	7	1	.....	10	9	.....
19	Hotels and restaurants.....	7	71	56	.....	10-12	10-12	.....
20	Ice manufactures and delivery.....	1	60	.....	.....	10	.....	.....
21	Jewelry (manufactures and retail).....	1	10	.....	.....	10	.....	.....
22	Laundries.....	2	13	34	.....	10	10	.....
23	Light and water supplies.....	2	92	2	.....	8-10-12	9	.....
24	Lined oil manufactures.....	1	44	2	.....	12	9	.....
25	Livery.....	1	12	.....	.....	10	.....	.....
26	Live stock and commission.....	3	96	.....	.....	10	.....	.....
27	Lumber (wholesale and retail).....	2	15	1	.....	10	8	.....
28	Machine shops, repairing.....	2	10	.....	.....	10	.....	.....
29	Mattress manufactures.....	2	22	4	2	10	10	10
30	Milling, flour, grain and cereals.....	8	184	26	.....	10-12	10	.....
31	Mineral waters (bottling).....	1	9	2	.....	10	8	.....
32	Packing meats and provisions.....	2	1,200	70	65	10	9	10
33	Painting, wall paper and glass.....	8	35	8	1	9	8	9
34	Plumbing and heating.....	5	49	5	.....	8	8	.....
35	Printing, binding and publishing.....	5	324	20	80	8-9	9	2
36	Sash, door and fixture mfrs.....	1	50	.....	.....	.....	.....	.....
37	Street railway transportation.....	1	162	.....	.....	10-12	.....	.....
38	Shirts and overall manufactures.....	1	11	75	.....	10	10	.....
39	Soap manufactures.....	1	23	10	2	10	10	10
40	Transfer and storage.....	1	7	1	.....	10	10	.....
41	Wholesale boots and shoes.....	1	4	1	.....	9	8	.....
42	Wholesale drugs.....	1	30	5	.....	8	8	.....
43	Wholesale fruits, produce and cold storage.....	3	56	17	.....	10	10	.....
44	Wholesale and retail groceries.....	5	274	50	.....	9-10	9	.....
45	Wholesale liquors and beer.....	4	39	.....	.....	10	.....	.....
46	Wholesale oils, grease and tallow.....	2	15	1	.....	10	8	.....
Total		107	8,780	656	185	.....	.....	.....

a Cause, "demand by bakers' union." b Causes, "faithfulness of men, they were
 "scarcity of good men" and "demand by employees." c Causes, "better service from
 10%, 12% and 13% to some employees as an experiment to see effect of services. g Cause,
 a fire the existing company employees 600 males, 30 females and 30 children. i Cause,
 being employed and higher wages paid.

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in Rate of Wages for 1902 Increase, Inc.; Decrease, Dec.			Average number of weeks in operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 1,800			\$ 1,800				52			1
4,600			4,600				52			2
6,828	7,800		14,128	aInc.	a10.00	a 17	52			3
800	2,058		2,858				52			4
11,604	1,660		18,264				52			5
14,440			14,440				88	14		6
7,626			7,626	bInc.	b10.00	b 8	82	20		7
\$ 47,698	\$ 11,018		\$ 58,716	8		20				

a Cause, "general rise of wages, employment more plentiful."

b Cause, "demand."

COUNTY.

\$ 22,082	\$ 2,148		\$ 24,210	aInc.	a10.00	a 26	52			1
16,757			16,757				52			2
90,864		\$ 290	90,864	bInc.	b15.00	b 225	82	14	6	3
3,638		c 100	3,738				50		2	4
10,100	1,720		11,820				52			5
44,732			44,732				52			6
16,820	860		17,170	Inc.	9.00	6	52			7
8,800	8,080		6,890				52			8
34,820			34,820	dInc.	d10.00	d 48	42	12		9
2,124			2,124				41	11		10
64,730	26,000	280	90,990				52			11
85,811	58,218	4,105	148,134	eInc.	e10.00	e 181	52			12
5,381			5,381				52			13
6,978			6,978				32	4	16	14
23,126	1,716		25,342	Inc.	10.00	10	52			15
20,229	965	590	21,174	Inc.	7.50	19	52			16
98,894	7,322	200	106,416	eInc.	e10.00	e 20	52			17
2,500	150		2,650				52			18
27,463	12,784		40,252	Inc.	5.00	65	52			19
23,062			23,062	fInc.	f	f	52			20
8,500			8,500				52			21
7,556	12,805		20,361				52			22
59,660	858		60,518	eInc.	e 5.00	e 40	52			23
19,151			19,151	eInc.	e10.00	e 40	83	19		24
5,880			5,880				52			25
71,860			71,860				52			26
11,000	420		12,020	Inc.	5.00	5	52			27
7,147			7,147				52			28
11,905	1,820	620	14,145				52			29
53,122	6,268		59,390	gInc.	g 7.50	g 70	52			30
3,550	564		4,114				26	26		31
h 453,662	h 12,630	h 7,956	h 453,248	fInc.	f 5.00	f 40	52			32
26,850	1,150	150	28,150				49			33
33,015	1,830		40,845	eInc.	e20.00	e 17	49	2	2	34
219,357	8,312	j 8,100	235,829				52			35
30,000			30,000	gInc.	g10.00	g 45	46			36
82,440			82,440	gInc.	g 3.00	g 162	50	4	2	37
6,032	18,968		25,000				52			38
11,540	2,500	810	14,810	Inc.	10.00	38	42	20		39
4,368	812		4,880				52			40
2,440	450		3,890	Inc.	10.00	5	52			41
14,461	2,054		16,515	kInc.	k20.00	k	52			42
87,099	5,480		42,522	eInc.	e18.50	e 36	52			43
243,859	17,070		260,429	eInc.	e 5.00	e 18	52			44
27,520			27,520	eInc.	e10.00	e 6	52			45
18,790	600		14,860				52			46
\$2,057,798	\$207,904	\$ 22,571	\$2,288,073	85		1,117				

entitled to it, prosperity and increase in cost of living " c Five months only. d Causes, employees, increased cost of living and better trade. f Increases of wages granted equaling "demand for labor." h Wage accounts from one firm only, the other lost all the records in "greater demand for beef butchers." j Carrier boys. k Increase caused by more help

EMPLOYERS STATISTICAL REPORT

WORTH

Marginal number.	Industry or Kind of Business.	Number establishments reporting.	Average Number of Employees for 1902.			Hours Worked Per Day by		
			Adult males	Adult females	Children under 16.	Adult males	Adult females	Children under 16.
1	Grain and farm implements.	1	9	1	.....	9	9	.....
2	Milling and light supply	2	6	.....	.....	10	.....	.....
3	Tow manufactures.	1	8	.....	.....	10	.....	.....
	Total	4	23	1	.....	.....	.....	.....

WRIGHT

1	Brick and tile manufactures	2	12	.....	.....	10	.....	.....
2	Clothing and tailoring	1	4	1	.....	10	8	.....
3	Hotels	1	1	.....	.....	16	18	.....
4	Light, water, lumber and hardware	3	5	.....	.....	10	.....	.....
	Total	7	22	6	.....	.....	.....	.....

α Cause, "scarcity of tailors."

*MISCELLANEOUS No. 1—REPORTS

1	Express companies (railroad).	1	68	.....	.....	10-12	.....	.....
2	Farm machinery manufactures and agencies	1	283	5	.....	10	10	.....
3	Grain elevators	2	33	.....	.....	10	.....	.....
4	Lumber (wholesale and retail)	2	43	.....	.....	8-10	.....	.....
5	Messenger service	1	34	7	58	10	10	10
6	Telegraph service	2	158	33	47	10	10	10
7	Telephone service	1	218	339	.....	9	9	.....
	Total	10	827	384	105	.....	.....	.....

*This section of the table comprises such industries that are located in several sections of the state are over that number and therefore given in this table. α Cause, "scarcity of

*MISCELLANEOUS No. 2—REPORTS

1	Brick and tile manufactures	1	26	.....	.....	10	.....	.....
2	Dry goods and general merchandise	1	8	3	.....	10	9	.....
3	Dry goods and general merchandise	1	8	1	.....	12	12	.....
4	Hotels	1	8	12	.....	10	10	.....
	Total	4	45	16	.....	.....	.....	.....

*This section of the table comprises reports from such counties where only one report was from Mitchell county. α Cause, "scarcity of labor"

TABLE No. 1—CONTINUED.

COUNTY.

Total Wages Paid in 1902 to				Variation in rate of Wages for 1902 Increase, Inc.; Decrease, Dec.			Average Number of Weeks in Operation in 1902.			Marginal number.
Adult males.	Adult females.	Children under 16.	Total.	Inc. or Dec.	Average per cent.	For number employes.	Full force full time.	Short time, reduced force.	Suspended.	
\$ 5,400	\$ 420	.....	\$ 5,820	.....	.....	.....	52	.....	.....	1
2,600	.....	.....	2,600	.....	.....	.....	52	.....	.....	2
1,832	.....	.....	1,832	.....	.....	.....	28	.....	24	8
\$ 9,832	\$ 420	.....	\$ 10,352	.....	.....	.....	.....	.....	.....	

COUNTY.

\$ 8,500	.....	.....	\$ 8,500	.....	.....	.....	14	14	24	1
2,300	\$ 375	.....	2,675	inc.	a 15.00	a 5	44	8	.....	2
250	750	.....	1,000	.....	.....	.....	52	.....	.....	3
2,340	.....	.....	2,340	.....	.....	.....	52	.....	.....	4
\$ 8,390	\$ 1,125	.....	\$ 9,515	1	.....	5	.....	.....	.....	

OF INDUSTRIES AND LOCALITIES.

\$ 11,078	.....	.....	\$ 11,078	.....	.....	.....	52	.....	.....	1
184,848	\$ 2,628	.....	187,476	.....	.....	.....	52	.....	.....	2
19,200	.....	.....	19,200	.....	.....	.....	52	.....	.....	3
26,500	.....	.....	26,500	.....	.....	.....	52	.....	.....	4
8,479	1,223	\$ 8,771	19,078	inc.	a 5.00	a 16	52	.....	.....	5
88,281	15,400	6,120	109,884	inc.	15.00	19	52	.....	.....	6
174,136	94,534	.....	268,690	.....	.....	.....	52	.....	.....	7
\$ 462,605	\$114,490	\$ 14,891	\$ 591,986	2	.....	85	.....	.....	.....	

the state in some of which localities 5 persons are not employed but the aggregate employees in boys."

OF INDUSTRIES AND LOCALITIES.

\$ 7,500	.....	.....	\$ 7,500	inc.	a 10	a 26	52	.....	20	1
8,725	\$ 470	.....	4,55	.....	.....	.....	52	.....	.....	2
4,892	156	.....	4,548	.....	.....	.....	52	.....	.....	3
1,200	1,800	.....	8,000	inc.	a 10	a 12	52	.....	.....	4
\$ 16,817	\$ 2,886	.....	\$ 19,203	2	.....	88	.....	.....	.....	

obtained. No. 1 being from Pocahontas; No. 2, from Madison; No. 3, from Monona and No. 4,

SUMMARY BY COUNTIES—TABLE No. 2

From statistical reports of employers of five or more persons for 1902.

County.	Num-ber estab-lish-ments report-ing.	Average Number of Employees for 1902.			Total Wages Paid in 1902 to				Increase in Rate of Wages for 1902.		
		Adult males.	Adult fe-males.	Chil-dren under 16.	Adult males.	Adult females.	Children under 16.	Total.	By number of em-ployers.	Aver-age per cent.	To num-ber of em-ployes.
*Adair.	5	39	3		\$ 7,720	\$ 540		\$ 8,260			
Adams.	7	176	83		53,049	4,780		57,829	4	7.50	121
Allamore.	17	696	22	5	396,371	5,249	\$ 700	401,320	4	9.25	78
Appanoose.	2	17			2,498		175	2,643			
Audubon.	11	604	519	104	43,322	14,678	2,644	94,644	3	13.88	26
Benton.	57	1,422	399	108	714,179	98,811	4,077	812,067	15	9.00	257
Black Hawk.	18	1,162	58	2	68,849	13,861	825	96,495	7	13.00	80
Boone.	3	59	22		26,572	6,896		33,468	1	10.00	18
Bremer.	4	70	1		34,653	997		35,650	1	10.00	12
Buchanan.	4	31	4		12,644	1,144		13,788	1	10.00	8
Buena Vista.	2	3			1,900			1,900			
Butler.											
*Calhoun.											
Carroll.	3	28	6		7,499	1,200		8,699			
Cass.	8	306	95	21	47,524	11,134	1,531	60,193	1	20.00	300
Cedar.	1	38	1	6	38,053	600	1,060	39,713			
Cerro Gordo.	19	414	64		237,046	17,536		254,582	7	9.30	240
Cherokee.	9	27	9		10,658	3,000		13,658	1	5.00	8
Chickasaw.	8	13	7	1	8,740	1,100	96	9,936			
Clarke.	1	4			1,640			1,640	1	10.00	1
Clay.	3	23	4		6,850	1,650		8,500	1	20.00	8
Cayton.	8	278	8		101,060	1,608		102,700	2	20.00	150
Clinton.	2,196	281	281	82	984,444	53,635	8,781	994,860	11	9.00	918
Crawford.	8	18	8	2	7,196	1,044	126	8,366	1	5.00	12
Dallas.	10	193	1		53,414	312		54,726	2	6.00	26
Davis.	1	5			3,442			3,442			
*Decatur.	2	15			8,900			8,900	1	10.00	7
Delaware.	9	55	8	8	24,311	1,846	115	26,172	1	10.00	12
Des Moines.	75	2,492	447	98	1,140,815	97,299	12,410	1,298,591	21	9.50	522
Dickinson.	25	15	25		1,200	1,500		2,700			
Dub que.	99	8,835	1,188	192	1,994,525	294,195	23,825	2,319,844	25	8.55	820
Emmet.	6	98	13	1	14,025	2,725		16,750			
Fayette.	9	123	78	20	18,618	7,907	1,718	26,463	8	8.33	110
Floyd.	10	154	8	20	65,638	1,868		69,224	8	9.00	11

SUMMARY BY COUNTIES—TABLE No. 2—CONTINUED.

County.	Num-ber estab-lish-ments report-ing.	Average Number of Employees for 1902.		Total Wages Paid in 1902 to			Increase in Rate of Wages for 1902.		To num-ber of em-ployee.
		Adult males.	Chil-dren under 16.	Adult males.	Adult females.	Children under 16.	By number of em-ployers.	Aver-age per cent.	
Story.....	4	22	1	\$ 8,804	\$ 1,080	\$ 50	2	16.50	9
Tama.....	5	52	1	28,581	600	118	1	10.00	8
Taylor.....	4	89	2	12,914	360	118	1	5.00	20
Union.....	11	87	1	36,784	7,748	104	4	10.00	58
Van Buren.....	6	70	49	23,563	8,229	23,021	2	7.50	27
Wapello.....	60	2,881	145	1,172,774	97,821	23,021	18	9.11	288
Warren.....	2	8	4	8,200	90	4,110	2	7.50	12
Washington.....	9	53	6	18,848	7,800	201	2	20.00	25
Wayne.....	6	109	2	88,048	80	281,849	2	20.00	25
Webster.....	36	1,154	229	817,711	82,089	80	11	10.00	218
Winnebago.....	8	71	15	9,990	1,276	1,878	8	10.00	20
Winneshiek.....	10	90	88	47,698	11,018	225	8	9.41	1,117
Woodbury.....	107	8,780	185	2,067,598	207,904	22,571	85	15.00	5
Worth.....	4	23	1	9,581	420	10,852	1	10.00	85
Wright.....	7	22	6	8,890	1,125	9,515	2	10.00	88
Miscellaneous No. 1.....	10	827	105	462,645	114,490	14,881	2	10.00	88
Miscellaneous No. 2.....	4	45	16	16,817	2,386	19,203	2	10.00	88
Total for state.....	1,627	47,887	11,812	\$ 23,883,255	\$ 2,788,190	\$ 817,352	421	+10.34	11,480

* None reported. + See Miscellaneous No. 2, Table No. 1.

b One establishment employing 150 males and 30 females; employers did not report wage account separately.

† Average increase granted by all employers reporting.

COMPARATIVE SUMMARY FOR IOWA—TABLE No. 3.

FROM STATISTICAL REPORTS OF EMPLOYERS OF FIVE OR MORE PERSONS IN THE STATE.

Showing the percentages of increase or decrease from 1896 to 1902, and for each biennial period from 1896.

	1896.	1898.	1900.	1902.	Per Cent of Increase, Inc.; or Decrease, Dec.			
					1896 to 1898.	1898 to 1900.	1900 to 1902.	1896 to 1902.
Number establishments reporting	1,752	1,625	1,285	1,627	Dec. 7.81	Dec. 28.45	Inc. 28.61	Dec. 7.18
Average number employees	49,273	55,429	51,175	62,299	Inc. 12.49	Dec. 8.81	Inc. 21.75	Inc. 28.43
Adult males	40,854	45,008	41,883	47,887	Inc. 10.16	Dec. 6.92	Inc. 14.24	Inc. 17.14
Adult females	7,782	9,840	9,231	11,812	Inc. 28.71	Dec. 5.80	Inc. 27.27	Inc. 59.77
Children under 16	687	623	<i>a</i>	2,680	Dec. 9.81	Inc. <i>a</i>	Inc. 823.15	Inc. 282.82
Total wages	\$ 17,380,622	\$ 19,623,882	\$ 21,145,961	\$ 28,660,004	Inc. 12.98	Inc. 7.75	Inc. 28.07	Inc. 53.48
Paid adult males	<i>a</i>	<i>a</i>	18,532,484	23,853,255				
Paid adult females	<i>a</i>	<i>a</i>	1,704,888	2,733,190				
Paid children under 16	<i>a</i>	<i>a</i>	413.85	917,882				
Average annual earnings per employe	852.15 ^b	354.16 ^b	413.85	434.85	Inc. 0.37	Inc. 16.71	Inc. 5.22	Inc. 28.27
Average annual earnings adult males	<i>a</i>	<i>a</i>	442.36 ^c	601.80				
Average annual earnings adult females	<i>a</i>	<i>a</i>	188.16 ^c	241.49				
Average annual earnings children under 16	<i>a</i>	<i>a</i>	<i>a</i>	122.18 ^d				

* Includes wages of all employes, men, women and children.
 † Increase for four years from 1896 to 1902.
 ‡ Increase for four years from 1898 to 1902.

(900) is deducted from the total of 62,299 in computing the average annual earnings of all employes. One firm with no regular force but who employ persons irregularly at their home, report a wage account of \$5,800 for 1902. This sum is deducted from the total, \$29,660,004, in computing the average for all employes.
a The wage account of 1,329 adult male employes was not separately reported. This number (1,329) is deducted from the total of 47,887 in computing the average annual earnings of adult males.
b The wage accounts of 490 adult female employes was not separately reported. This number (490) is deducted from the total of 11,812 in computing the average annual earnings of adult females.
c The wage account of forty-seven children was not separately reported. This number (47) is deducted from the total of 2,680 in computing the average annual earnings of children.

IMMIGRATION.

The question of immigration to the United States is always one that interests the general public; the following tables show the number and nationality of immigrants destined to Iowa for the two fiscal years ending, respectively, June 30, 1901, and June 30, 1902; and for the ten months of the present fiscal year.

In addition, tables are given showing the immigration to the United States in detail for the months of May, June, August and September, 1902 and 1903, and the fiscal years ending May and June, 1902 and 1903:

NUMBER AND NATIONALITY OF IMMIGRANTS TO IOWA FROM JUNE 30, 1900,
TO APRIL 30, 1903.

Nationalities.	Fiscal year 1901.	Fiscal year 1902.	Fiscal year 1903. 10 months.
Bohemian and Moravian.....	87	7	98
Armenian.....			1
Bulgarian, Servian and Montenegrin.....			7
Chinese.....		2	
Croatian and Slavonian.....	52	81	113
Dutch and Flemish.....	235	450	402
East Indian.....			1
English.....	118	107	136
Filipino.....		1	8
Finnish.....	20	20	8
French.....	10	18	21
German.....	909	1,135	1,227
Greek.....	2	9	18
Hebrew.....	122	95	185
Irish.....	123	92	105
Italian (North).....	68	99	104
Italian (South).....	110	94	58
Japanese.....		8	
Lithuanian.....	18	6	6
Magyar.....	8	14	7
Pish.....	14	33	18
Romanian.....			4
Russian.....			8
Ruthenian (Rusniak).....	1		1
Scandinavian (Norwegian, Danes and Swedes).....	1,640	2,622	2,538
Scotch.....	10	28	38
Slovak.....	28	11	17
Spanish.....	7		
Syrian.....	84	79	62
Welsh.....	13	12	11
Grand total.....	8,664	5,064	5,187

During the past five years the immigration to the state of Iowa was divided among the principal races and occupations according to the following proportions:

Nationalities.		Occupations.	
Scandinavian	48 %	Laborers	29 %
German	23 %	Personal domestic servants	14 %
Dutch	7 %	Farm laborers	18 %
English	8 %	Skilled occupations	11 %
Irish	8 %	Farmers	2 %
Hebrew	8 %	Merchants	1 %
Croatian	2 %	No occupations (including women and children)	30 %
Italian (North)	2 %		
All other races	9 %		
Total	100 %	Total	100 %

IMMIGRATION TO UNITED STATES DURING MAY, 1902 AND 1903.

Comparative statement showing the number of immigrants that arrived in the United States, by countries, during the month of May, 1902, and 1903, respectively, showing increase and decrease for each country.

Country.	1902	1903	Increase.	Decrease.
Austria-Hungary	25,000	32,709	7,709	
Belgium	231	375	94	
Denmark	736	1,008	249	
France, including Corsica	291	945	654	
German Empire	4,331	6,440	2,069	
Greece	1,011	1,300	289	
Italy, including Sicily and Sardinia	36,898	37,738	875	
Netherlands	349	559	210	
Norway	3,449	4,743	1,294	
Portugal, including Cape Verde and Azore Islands	767	1,398	1,181	
Roumania	444	607	163	
Russian Empire and Finland	14,248	17,897	3,649	
Serbia, Bulgaria and Montenegro	137	312	175	
Spain, including Canary and Balearic Islands	91	234	203	
Sweden	5,896	9,008	3,712	
Switzerland	340	675	335	
Turkey in Europe	40	203	163	
England	1,481	4,520	3,039	
Ireland	7,194	8,334	1,640	
Scotland	223	1,167	944	
Wales	33	103	70	
Total Europe	103,328	132,065	28,667	
China	149	190	41	
Japan	1,843	2,190	347	
India	6	10	4	
Turkey in Asia	377	444	67	
Other Asia	2	290	288	433
Total Asia	2,377	3,124	747	
Africa		32	32	
Australia, Tasmania and New Zealand	36	247	211	
Philippine Islands	6	11	5	
Pacific Islands, not specified	8	1		7
British North America	28	121	93	
British Honduras	1	25	24	
Other Central America	13	70	57	
Mexico	53	111	58	
South America	43	76	33	
West Indies	578	1,691	1,113	
All other countries	30			30
Grand total	107,001	137,514	30,513	
Aliens in transit	9,386	2,336		6,550
Grand total	116,387	140,350	23,963	

IMMIGRATION TO UNITED STATES DURING JUNE 1902 AND 1903.

Comparative statement showing the number of immigrants that arrived in the United States, by countries, during the month of June, 1902 and 1903, respectively, showing increase and decrease for each country.

Country.	1902.	1903.	Increase.	Decrease.
Austria-Hungary	16,658	25,171	8,513	.....
Belgium	233	483	250	.....
Denmark	651	869	218	.....
France, including Corsica	250	615	365	.....
German Empire	3,033	4,140	1,107	.....
Greece	1,123	1,118	.....	5
Italy, including Sicily and Sardinia	19,596	21,880	2,284	.....
Netherlands	179	567	388	.....
Norway	2,762	3,625	863	.....
Portugal, including Cape Verde and Azore Islands	959	799	.....	160
Roumania	881	775	.....	106
Russian Empire and Finland	16,432	20,894	3,662	.....
Servia, Bulgaria and Montenegro	109	227	118	.....
Spain, including Canary and Balearic Islands	76	232	156	.....
Sweden	4,296	5,352	1,056	.....
Switzerland	124	315	191	.....
Turkey in Europe	24	317	293	.....
England	1,376	3,445	2,069	.....
Ireland	2,536	3,180	594	.....
Scotland	303	953	650	.....
Wales	80	150	70	.....
Europe, not specified	1	1	.....	.....
Total Europe	71,702	94,528	22,826	.....
China	297	322	25	.....
Japan	2,202	1,338	.....	844
India	13	8	.....	5
Turkey in Asia	869	721	.....	148
Other Asia	6	11	5	.....
Total Asia	3,387	2,420	.....	967
Africa	2	45	43	.....
Australia, Tasmania and New Zealand	56	171	115	.....
Philippine Islands	13	24	11	.....
Pacific Islands, not specified	51	4	.....	10
British North America	11	87	76	.....
British Honduras	2	21	19	.....
Other Central America	24	53	29	.....
Mexico	63	113	49	.....
South America	37	170	133	.....
West Indies	202	1,182	980	.....
All other countries	7	4	.....	3
Grand Total	75,550	98,821	23,261	.....
Aliens in transit	7,640	2,352	.....	5,278
Total aliens	83,200	101,183	17,983	.....

IMMIGRATION TO UNITED STATES DURING AUGUST, 1902 AND 1903.

Comparative statement showing the number of immigrants that arrived in the United States, by countries, during the month of August, 1902 and 1903, respectively, showing increase and decrease for each country.

Country.	1902.	1903.	Increase.	Decrease.
Austria-Hungary.....	8,887	15,399	7,012	
Belgium.....	237	426	189	
Denmark.....	259	632	373	
France, including Corsica.....	908	912	609	
German Empire.....	2,531	4,096	1,535	
Greece.....	466	543	77	
Italy, including Sicily and Sardinia.....	9,342	12,342	3,000	
Netherlands.....	181	965	184	
Norway.....	1,470	1,791	321	
Portugal, including Cape Verde and Azore Islands.....	1,297	450		847
Roumania.....	1,090	692		398
Russian Empire and Finland.....	8,787	11,335	2,518	
Servia, Bulgaria and Montenegro.....	55	80	25	
Spain, including Canary and Balearic Islands.....	100	201	101	
Sweden.....	3,024	3,019		9
Switzerland.....	183	967	184	
Turkey, in Europe.....	72	244	172	
England.....	1,818	4,133	2,320	
Ireland.....	2,160	2,622	462	
Scotland.....	228	1,055	827	
Wales.....	120	238	118	
Total Europe.....	42,109	60,912	18,803	
China.....	229	592	363	
Japan.....	1,706	1,084		672
India.....	1	12	11	
Turkey, in Asia.....	764	574		190
Other Asia.....	7	8	1	
Total Asia.....	2,707	2,220		487
Africa.....	2	54	52	
Australia, Tasmania and New Zealand.....	66	126	60	
Philippine Islands.....	89	10		29
Pacific Islands, not specified.....	2	1		1
British North America.....	83	257	219	
British Honduras.....	1	7	6	
Other Central America.....	45	42		3
Mexico.....	26	96	70	
South America.....	71	266	195	
West Indies.....	484	985	551	
All other countries.....	9	1		8
Total immigrants.....	45,549	64,977	19,428	

IMMIGRATION TO UNITED STATES DURING SEPTEMBER, 1902 AND 1903.

Comparative statement showing the immigration into the United States, by countries, during the months of September, 1902 and 1903, respectively, showing increase and decrease for each country.

Country.	1902.	1903.	Increase.	Decrease.
Austria-Hungary.....	12,096	18,801	6,708	
Belgium.....	282	511	229	
Denmark.....	619	735	116	
France, including Corsica.....	384	1,272	888	
German Empire.....	3,498	5,062	1,564	
Greece.....	912	586		326
Italy, including Sicily and Sardinia.....	11,719	11,875	156	
Netherlands.....	190	424	234	
Norway.....	2,141	2,473	332	
Portugal, including Cape Verde and Azore Islands.....	368	660	292	
Romania.....	1,218	1,027		191
Russian Empire and Finland.....	10,282	13,425	3,143	
Servia, Bulgaria and Montenegro.....	72	57		15
Spain, including Canary and Balearic Islands.....	124	309	185	
Sweden.....	5,069	4,469		600
Switzerland.....	201	583	382	
Turkey in Europe.....	18	275	257	
England.....	2,178	4,664	2,486	
Ireland.....	4,275	5,272	997	
Scotland.....	325	1,361	1,036	
Wales.....	120	233	113	
Total Europe.....	56,063	74,064	18,021	
China.....	174	432	258	
Japan.....	725	806	81	
India.....	11	4		7
Turkey in Asia.....	645	465		180
Other Asia.....	2	11	9	
Total Asia.....	1,557	1,718	161	
Africa.....	4	26	22	
Australia, Tasmania and New Zealand.....	84	149	65	
Philippine Islands.....	6	59	53	
Pacific Islands, not specified.....	5	17	12	
British North America.....	142	740	598	
British Honduras.....		1	1	
Other Central America.....	9	74	65	
Mexico.....	82	124	42	
South America.....	17	181	164	
West Indies.....	302	1,334	1,032	
All other countries.....	7			7
Total immigration.....	58,228	73,557	20,329	

IMMIGRATION TO UNITED STATES DURING FISCAL YEAR ENDING JUNE, 1903.

Comparative statement showing the number of immigrants that arrived in the United States, by countries, during the fiscal years ended June 30, 1902 and 1903, respectively, showing increase and decrease for each country.

Country.	1902.	1903.	Increase	Decrease.
Austria-Hungary.....	171,989	206,011	34,022	
Belgium.....	2,577	3,460	883	
Denmark.....	5,090	7,168	2,078	
France, including Corsica.....	8,117	5,578	2,539	
German Empire.....	28,804	40,086	11,282	
Greece.....	8,104	14,080	5,976	
Italy, including Sicily and Sardinia.....	178,875	250,622	71,747	
Netherlands.....	2,284	3,998	1,714	
Norway.....	17,484	24,401	6,917	
Portugal, including Cape Verde and Azore Islands.....	5,807	8,817	3,010	
Roumania.....	7,196	9,810	2,614	
Russian Empire and Finland.....	107,847	136,098	28,251	
Servia, Bulgaria and Montenegro.....	851	1,761	910	
Spain, including Canary and Balearic Islands.....	875	2,080	1,205	
Sweden.....	80,891	46,028	34,863	
Switzerland.....	2,844	3,888	1,044	
Turkey in Europe.....	2,187	1,529	658	
England.....	18,575	26,219	7,644	
Ireland.....	29,188	35,810	6,622	
Scotland.....	2,580	6,148	3,568	
Wales.....	763	1,275	512	
Europe, not specified.....	87	5		82
Total Europe.....	619,069	814,507	195,438	
China.....	1,649	2,209	560	
Japan.....	14,270	19,968	5,698	
India.....	93	94	1	
Turkey in Asia.....	6,223	7,118	895	
Other Asia.....	96	577	481	
Total Asia.....	22,271	29,966	7,695	
Africa.....	87	176	89	
Australia, Tasmania and New Zealand.....	384	1,150	766	
Philippine Islands.....	126	182	56	
Pacific Islands, not specified.....	56	67	11	
British North America.....	696	1,058	362	
British Honduras.....	51	81	30	
Other Central America.....	254	597	343	
Mexico.....	709	528	181	
South America.....	587	589	2	
West Indies.....	4,711	8,170	3,459	
All other countries.....	108	25		78
Total immigration.....	648,743	857,046	208,303	
Other alien passengers.....	82,055	64,289		17,766
Total alien passengers.....	730,798	921,315	190,517	

IMMIGRATION TO UNITED STATES.

Statement showing the number of aliens landed, debarred, and returned in one year after landing, by ports, during the month ending May 31, 1903.

Ports.	Land- ed.	Debarred.									Re- turn ed in one year after land- ing.	
		Id- lots	In- sane per- sons.	Paup- ers, or like- ly to be- come pub- lic char- ges.	Loath- some or dang- erous con- tagious diseases.	Con- victs.	Polyg- amists.	Assist- ed im- mi- grants.	Women for immoral pur- poses.	Con- tract la- bor- ers.		Total de- bar- red.
New York, N. Y.	101,925	1	2	702	47	8				201	967	80
Boston, Mass.	11,124			21	5						28	4
Philadelphia, Pa.	8,246			5	8						8	1
Baltimore, Md.	9,442			22	1					2	25	
San Francisco, Cal	1,118			1	8						9	
Quebec and St. John, Can.	4,848			21	21						42	
Vancouver, Can.	239			1						1	2	
San Juan, P. R.	145											11
Key West, Fla.	968			1							1	
New Orleans, La.	1,044		2	8	2					1	8	1
Galveston, Tex.	189				1						1	
Port Townsend, Wash.	565											4
Portland, Me.												
Honolulu, H. I.	1,458			1	28					8	32	
Portland, Ore.	76											
New Bedford, Mass	1,512			5	6						11	
Providence, R. I.	125			5							5	
Total	187,514	1	4	794	122	8				208	1,187	51

IMMIGRATION TO UNITED STATES.

Statement showing the number of aliens landed, debarred, and returned in one year after landing, by ports, during the month ending June 30, 1903.

Ports.	Land- ed.	Debarred.									Re- turn- ed in one year after land- ing.	
		Idi- ots.	In- sane per- sons.	Paup- ers or like- ly to be- come pub- lic char- ges.	Loath- some or dang- erous con- tagious diseases.	Con- victs.	Polyg- amists.	Assist- ed im- mi- grants.	Women for im- moral pur- poses.	Contract la- bor- ers.		Total de- bar- red.
New York, N. Y.	74,022		4	476	178	8				199	865	25
Boston, Mass.	5,981		1	96	4						41	8
Philadelphia, Pa.	4,025		1	8	2					2	13	7
Baltimore, Md.	6,944			10	4					8	17	1
San Francisco, Cal.	666			7	8					2	12	
Quebec and St. John, Can.	4,186			13	22						35	
Vancouver, Can.	455			8	1					1	5	
San Juan, P. R.	139			6							6	
Key West, Fla.	416											
New Orleans, La.	49			4	1						5	2
Galveston, Tex.	313			4							4	
Port Townsend, Wash.	214			5	4						9	
Portland, Me.	2			2							2	
Honolulu, H. I.	876			5	12				2	2	21	2
Portland, Ore.	80											
New Bedford, Mass.	468			14	1						115	
Bangor, Me.	1											1
Gloucester, Mass.	3											
Shildsboro, Miss.	4							2			2	
Fernandina, Fla.	7											
Wilmington, Del.	1											
Jacksonville, Fla.	15											
Miami, Fla.	2											
Newport News, Va.	1											
Beaufort, S. C.	1											
Total.	96,821		6	593	292	3		2	2	209	1,062	46

IMMIGRATION TO UNITED STATES.

Statement showing the number of aliens landed, debarred, and returned in one year after landing, by ports, during the month ending July 31, 1903.

Ports.	Land- ed.	Debarred.									Re- turn- ed in one year after land- ing.	
		Idi- ots.	In- sane per- sons.	Pa- pers, or like- ly to be- come pub- lic char- ges.	Loath- some or dang- erous con- tagious diseases.	Con- victs.	Polyg- amists.	Assist- ed im- mi- grants.	Women for im- moral pur- poses.	Con- tract la- bor- ers.		Total de- bar- red.
New York, N. Y.	43,044	...	1	477	198	2	18	...	...	167	963	89
Boston, Mass.	4,447	...	1	21	3	...	...	...	...	...	25	2
Philadelphia, Pa.	2,254	...	...	1	2	...	...	...	...	...	3	2
Baltimore, Md.	5,898	...	...	18	1	...	...	...	...	...	17	1
San Francisco, Cal.	817	...	...	2	1	...	...	...	...	23	26	...
Quebec and St. John, Can.	3,241	...	1	19	57	...	...	...	...	...	77	...
Vancouver, Can.	253	...	...	1	2	...	...	...	...	3	6	...
San Juan, P. R.	110	...	...	1	...	...	...	...	...	...	1	1
Key West, Fla.	363	...	...	...	...	...	...	...	...	...	...	...
New Orleans, La.	53	...	...	1	...	...	...	...	...	...	3	1
Galveston, Tex.	225	...	...	...	...	...	...	...	...	...	...	...
Port Townsend, Wash.	213	...	...	1	...	...	...	...	...	3	4	...
Portland, Me.	...	...	...	...	...	...	...	...	...	...	...	...
Honolulu, H. I.	747	...	...	1	3	...	...	...	1	...	5	1
Portland, Ore.	33	...	...	...	...	...	...	...	...	...	...	...
New Bedford, Mass.	334	...	...	5	1	...	...	...	...	1	7	...
Newport News, Va.	1	...	...	...	...	...	...	...	...	...	...	...
Mobile, Ala.	5	...	...	...	...	...	...	...	...	...	...	...
Total	67,588	...	3	548	298	2	18	...	1	197	1,037	47

IMMIGRATION TO UNITED STATES.

Statement showing the number of aliens landed, debarred, and returned in one year after landing, by ports, during the month ending August 31, 1903.

Port.	Land- ed.	Debarred.										Re- turned in one year after land- ing.
		Idi- ots.	In- sane per- sons.	Pa- pers or like- ly to be- come pub- lic char- ges.	Loath- some or dang- erous con- tagious diseases.	Con- victs.	Poly- gamists.	Assist- ed im- mi- grants	Women for im- moral pur- poses.	Con- tract la- bor- ers.	Total De- bar- red.	
New York, N. Y.	48,406	1	.....	325	80	6	7	.....	.....	80	490	55
Boston, Mass.	4,888	.....	.....	49	5	.....	.....	.....	.....	4	58	3
Philadelphia, Pa.	1,781	.....	.....	1	.....	.....	.....	.....	.....	.....	1	2
Baltimore, Md.	4,082	.....	.....	18	8	.....	.....	.....	.....	.....	21	5
San Francisco, Cal.	822	..	.....	107	7	.....	.....	.....	.....	.....	114	1
Quebec and St. John, Can.	2,842	.....	.....	96	50	.....	.....	.....	.....	.....	96	.....
Vancouver, Can.	448	.....	.....	8	2	.....	.....	.....	.....	8	18	.....
San Juan, P. R.	181	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....
Key West, Fla.	279	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Orleans, La.	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	180	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Townsend, Wash.	196	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Honolulu, H. I.	616	.....	.....	.....	9	.....	.....	.....	.....	1	10	.....
Portland, Ore.	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Bedford, Mas	202	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....
Mobile, Ala.	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport News, Va.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brunswick, Ga.	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shieldsboro, Miss.	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	64,977	1	.....	545	156	6	7	.....	.....	96	810	66

IMMIGRATION TO UNITED STATES.

Statement showing the number of aliens landed, debarred and returned in one year after landing, by ports, during the year ending June 30, 1903.

Ports.	Landed.	Debarred.										Returned in one year after landing.
		Idiots.	In-sane persons.	Paupers or likely to become public charges.	Loathsome or dangerous contagious diseases.	Convicts.	Polygamists.	Assisted immigrants.	Women for immoral purposes.	Contract laborers.	Total debarred.	
New York, N. Y.,	681,885	1	18	4,738	758	50	.....	7	.....	879	6,446	400
Boston, Mass.,	62,838	.....	1	418	34	.....	.....	.....	1	52	506	40
Philadelphia, Pa.,	27,760	.....	1	88	35	.....	.....	.....	.....	2	126	49
Baltimore, Md.,	55,862	.....	.....	121	59	.....	.....	.....	.....	55	235	21
San Francisco, Cal.,	7,256	.....	.....	37	39	.....	.....	.....	.....	9	85	1
Quebec and St. John, Can.,	82,948	.....	1	158	300	.....	.....	.....	.....	7	466	2
Vancouver, Can.,	2,977	.....	.....	16	2	.....	.....	.....	.....	16	34	.....
San Juan, P. R.,	2,120	.....	.....	22	.....	.....	.....	.....	2	17	41	11
Key West, Fla.,	4,554	.....	.....	29	.....	1	.....	.....	8	.....	38	8
New Orleans, La.,	5,093	.....	2	31	6	.....	.....	.....	.....	3	42	8
Galveston, Tex.,	2,130	.....	.....	30	3	.....	.....	.....	.....	.....	33	.....
Port Townsend, Wash.,	2,797	.....	.....	16	4	.....	.....	.....	.....	5	25	6
Portland, Me.,	69	.....	.....	7	.....	.....	.....	.....	.....	3	10	.....
Honolulu, H. I.,	14,550	.....	.....	74	526	.....	1	.....	2	38	641	2
Portland, Ore.,	413	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Bedford, Mass.,	3,339	.....	.....	32	7	.....	.....	.....	.....	.....	29	.....
Providence, R. I.,	271	.....	.....	10	.....	.....	.....	.....	.....	.....	10	.....
Newport, News, Va.,	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tampa, Fla.,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miami, Fla.,	207	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Bangor, Me.,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Gloucester, Mass.,	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shieldsboro, Miss.,	4	.....	.....	.....	.....	.....	.....	2	.....	.....	2	.....
Fernandina, Fla.,	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, Del.,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jacks nville, Fla.,	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beaufort, S. C.,	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	857,046	1	23	5,812	1,773	51	1	9	13	1,086	8,769	547

IMMIGRATION TO UNITED STATES.

Statement showing the number of aliens landed, debarred, and returned in one year after landing, by ports, during the month ending September 30, 1903.

Ports.	Land- ed.	Debarred.									Re- turned in one year after land- ing.	
		Idi- ots.	In- sane per- sons.	Paup- ers, or like- ly to be- come pub- lic char- ges	Loath- some or dang- erous con- tagious diseases.	Con- victs.	Polyg- amists.	Assist- ed im- mi- grants.	Women for im- moral pur- poses.	Con- tract la- bor- ers.		Total de- bar- red.
New York, N. Y.	56,321	....	2	228	33	....	....	....	....	86	354	22
Boston, Mass.	7,400	....	....	30	8	....	....	....	....	....	33	1
Philadelphia, Pa.	3,373	....	....	14	4	....	....	....	....	....	18	3
Baltimore, Md.	4,996	....	1	16	61	....	....	....	....	....	23	2
San Francisco, Cal.	913	....	1	54	11	....	....	....	....	1	67	....
Quebec and St. John, Can.	2,537	....	....	5	24	....	....	....	....	1	30	....
Vancouver, Can.	716	1	....	3	11	....	....	....	....	10	25	....
San Juan, P. R.	151	....	....	....	....	....	....	....	....	4	4	....
Key West, Fla.	297	....	....	....	....	....	....	....	....	....	....	1
New Orleans, La.	139	....	....	5	....	....	....	....	....	....	5	....
Galveston Tex.	9	....	....	3	....	....	....	....	....	....	3	....
Port Townsend, Wash.	200	....	....	....	....	....	....	....	....	....	....	1
Portland, Me.	....	....	....	....	....	....	....	....	....	....	....	....
Honolulu, H. I.	413	....	....	1	7	....	....	....	1	....	9	....
Portland, Ore.	....	....	....	....	....	....	....	....	....	....	....	....
New Bedford, Mass.	467	....	....	3	....	....	....	....	....	....	3	....
Miami, Fla.	17	....	....	....	....	....	....	....	....	....	....	....
Bangor, Me.	2	....	....	....	....	....	....	....	....	....	....	....
Wilmington, Del.	3	....	....	....	....	....	....	....	....	....	....	....
Mobile, Ala.	6	....	....	....	....	....	....	....	....	....	....	....
Total.....	78,557	1	4	362	104	....	....	....	1	102	574	30

WAGE EARNERS OF IOWA.

This chapter contains statistical data furnished by 395 individual wage earners of Iowa engaged in fifty-seven different occupations.

It can be said that it represents the highest type of manual toilers in the state.

The student of economic problems will find much in the tables and in the accompanying expressions under sub-heads following the table that will not only interest but instruct, because it so clearly manifests the voice of labor, and is representative in a fair degree of the conditions under which our wage workers in shops, mines and on railroads are surrounded, and expresses in a direct and reasonable manner the aspirations and expectations of the bread winners.

The greatest care has been observed in selecting the returns for tabulation with the object of exhibiting a representation for each craft in each locality as nearly as possible so that it conveys a fair average comparison for conditions existing in 1901, the year for which the material was collected.

Wages—The total annual wages earned during the year was reported by 337 or 85 per cent of the whole number as \$223,142.00, or an annual average for each of \$662.09.

Savings—The total savings reported for the year amounted to \$26, 215.00, or an average of \$189.26 for each of the 138 persons reporting, equaling 35 per cent of the whole number.

Life Insurance—Sixty percent or 236 persons reported as carrying life insurance, the total amounting to \$149,673.00, or an average of \$1,905.00 each.

Fire Insurance—One hundred and thirty-seven or about 37 per cent carry fire insurance on their homes and furniture to the extent of \$113,750.00, or an average of \$830.00 each.

The Home—Home owners amounted to 133 or about 33 per cent; seventy-four of whom valued their property at \$116,150.00, or an average of \$1,569.00; all of which is clear of incumbrance; fifty-nine others reported an equity of \$55,030.00 in property valued at \$96,300.00, an average indebtedness of \$699.00 on a total of \$41,270.00.

Appended herewith is a copy of the letter and schedule upon which the individual wage earners statistics were collected.

STATE OF IOWA

BUREAU OF LABOR STATISTICS.

Schedule No. 1.

INDIVIDUAL WAGE EARNERS STATISTICAL BLANK.

DES MOINES, IOWA.

SIR OR MADAM—The Commissioner of the Bureau of Labor Statistics of Iowa is authorized by law (chapter 8, sections No. 2469 to 2477, inclusive, revised Code of 1897, and amendments added to the law by the Twenty-ninth General Assembly), to collect, assort and present in biennial reports to the governor, statistical details relating to all departments of labor in the state, especially the number of laborers and mechanics employed, the number of hours they work, the rate of wages they receive, the number and character of accidents, the sanitary conditions of and the means of escape from and the protection of life and health in factories and institutions where labor is employed.

"If the Commissioner shall learn of any violation of or neglect to comply with the law with respect to the employment of children, or in regard to fire escapes, or the safety of employes, or for the preservation of health, he shall give written notice to the owner or the person in charge, of such offense or neglect, and if the same is not remedied within sixty days after service of such notice, he shall give the county attorney written notice of the facts, whereupon that officer shall immediately institute proper proceedings against the person guilty of such offense or neglect."

"No use of names shall be made of individuals, firms or corporations supplying information * * * such information being deemed confidential and not for the purpose of disclosing private affairs; any officer of the bureau violating this provision * * * shall be fined in a sum not exceeding \$500.00 and costs, or by imprisonment not exceeding one year.

Please fill out attached blank as completely as possible, as it applies to your occupation.

The provisions of law governing the bureau, as here quoted, assure all persons supplying information that it will be absolutely confidential and

can in no way interfere with the personal interests of the persons giving the same.

Names of persons reporting on this blank will not be divulged under any circumstances.

Yours truly,

EDWARD D. BRIGHAM, *Commissioner*.

PERSONAL.

1. Name in full.....P. O. Address.....Age.....Married or single.....

OCCUPATION, HOURS, EARNINGS AND ORGANIZATION.

2. What occupation are you following?.....3. Length of work day in summer?.....In winter?.....4. If possible, state how many days you were idle during the past year, and give the reasons.....5. What rate of wages do you receive? (Only fill out the space upon which your rate is based.) Per hour,.....cents. Per day, \$..... Per week, \$.....Per month, \$.....Per ton, \$.....Per mile.....cents. If working by the piece, ton, or mile, please give average earnings per day, \$.....6. Total wages earned during the past year, \$.....7. During the past year has your rate of wages been increased?.....Or has your rate decreased?.....If an increased rate, how was it obtained?.....How much of an increase or decrease per day?.....What per cent?.....8. Have employees in your occupation a wage schedule with your employers?.....9. What labor organization are you a member of?.....

SAFETY AND SANITATION.

10. Do you work with or around dangerous machinery?.....If so, is it properly guarded?.....11. State in detail (separately if desired) giving number and character of accidents from any cause coming under your observation, where labor is employed, during the past two years.....12. Are fire escapes or proper means of egress provided on buildings where you are employed?.....13. Are sanitary conditions healthful where you are employed?.....If not, state any defects.....14. Are separate water closets provided for both sexes?.....Are they kept in a cleanly condition?.....

EXPENSES, INSURANCE AND SAVINGS.

15. How many persons depend upon you for support including yourself?.....16. Cost of living for yourself and those depending on you for the past year: Food, \$.....Fuel, \$.....Clothing, \$.....Sickness, \$.....Rent, \$.....Sundry expenses, \$.....Total, \$.....17. What kind of insurance do you carry, and how much? Old line, life, how much, \$.....Annual cost, \$.....Fraternal life, how much, \$.....Annual cost, \$.....Accident, how much, \$.....Annual cost \$.....Fire, how much, \$.....Annual

cost, \$. 18. Do you own a home? If so, what is its value? \$. If not clear, what is your equity in same? \$. 19. Total amount of savings or permanent investments made during the past year exclusive of insurance? \$.

MISCELLANEOUS.

20. What specific state legislation would benefit wage earners in your occupation? 21. In what way can the Bureau of Labor Statistics best promote the interests of the wage earners and the people of the state?

REMARKS.

Questions No. 10, 11, 12, 13 and 14 are answered in a running summary as reported under head: "Shop and Factory Conditions."

Questions No. 15 and 16 were not answered in sufficient quantities to merit special mention, many replied that it cost them their entire income to live.

Question No. 20 is answered in summary of remarks under head: "Replies from Individual Wage Earners to Question: What Specific Legislation Would Benefit Wage Earners in Your Occupation?"

Question No. 21 is answered in summary form, under head: "Remarks From Wage Earners on General Subjects and Suggestions as to How the Bureau of Labor Can Best Promote the Interests of the Wage Earners and the People of the State."

Especial attention is called to conditions surrounding station agents and railroad telegraph operators. Each of these summaries will be found following the table in the order named.

WAGE EARNERS

INDIVIDUAL

Showing occupation, hours worked, wage rates, annual earnings, savings,

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or worse.

BAKERS.

1	Cedar Rapids	12	\$ 11.00	Week.	\$ 500	None.	Good.	.....
2	Des Moines	11	18.00	Week.	600	.....	Good.	.....
3	Ottumwa	11	12.00	Week.	500	.....	.....	.....
4	Sioux City	12	16.00	Week.	788	.....	.....	Filthy.

BARBERS.

5	Burlington.....	a 14	\$ 9.00	Week.	.....	None.	Good.	.....
6	Clinton.....	a 18	11.00	Week.	.....	None.	Good.	.....
7	Clinton.....	a 18	11.00	Week.	\$ 575	\$ 100	Good.	.....
8	Council Bluffs	a 18	12.00	Week.	.....	.....	.....	.....
9	Davenport	a 18	12.00	Week.	515	800	Good.	.....
10	Des Moines.....	a 11½	12.00	Week.	424	None.	Good.	.....
11	Dubuque.....	a 18	12.00	Week.	.....	200	Good.	.....
12	Keokuk.....	a 18	11.00	Week.	58	None.	Fair.	.....
13	Muscatine.....	a 12	18.00	Week.	675	.....	.....	Bad.
14	Oskaloosa.....	a 18	10.00	Week.	480	.....	Good.	.....
15	Oskaloosa.....	a 18	15.00	Week.	700	.....	Good.	.....
16	Ottumwa.....	a 14	10.00	Week.	480	.....	Good.	.....
17	Sioux City.....	a 12	8.00	Day.	854	None.	Fair.	.....

a Number of hours worked for 5 days per week; on Saturdays the hours are 16 and 17 60 per cent is usually allowed on all amounts over a total of \$20.00 which is earned by each

BLACKSMITHS.

18	a Cedar Rapids	10	\$ 1.75	Day.	\$ 450	.....	.....	Bad.
19	Corydon.....	10	2.00	Day.	550	\$ 200	.....	Poor.
20	Des Moines.....	10	4.75	Day.	1,400	800	Fair.	.....
21	Fort Madison.....	10	2.65	Day.	720	.....	Fair.	.....
22	Oelwein.....	10	2.60	Day.	660	60	Good.	.....
23	Ottumwa.....	9	.20	Hour.	582	200	Fair.	.....
24	Ottumwa.....	9	.25	Hour.	702	60	Fair.	.....
25	What Cheer	9	2.35	Day.	750	.....	Good.	.....
26	a What Cheer	9	1.75	Day.	387	None.	Good.	.....
27	Waterloo.....	10	8.15	Day.	.....	.....	.....	Bad.

a Helpers for blacksmiths.

BOILERMAKERS.

28	Cedar Rapids.....	10	\$ 2.90	Day.	\$ 780	\$ 188	Poor.	.....
29	a Dubuque.....	10	1.75	Day.	495	88	Fair.	.....
30	Sioux City	10	8.25	Day.	.....	400	.....	Bad

a Helper for boilermakers.

OF IOWA.

REPORTS.

insurance, the home, and variation in hours and wages since 1900.

Amount of Insurance Carried.		The Home.			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of.	Equity in.		

BAKERS.

....	.....	No.	....	.....	Inc. of \$1 per week through Baker's union.	1
\$ 2,400	.....	No.	.....	.....	3½ per cent inc. through Baker's union...	2
3,000	\$ 1,000	No.	.....	.....	10 per cent inc. through Baker's union	3
					16½ per cent increase by changing jobs	4

BARBERS.

\$ 2,000	....	Yes.	\$ 1,000	\$ 300	\$2.00 per week inc., due to organization...	5
.....	.....	No.	.....	.....	Increased wages by change of jobs.....	6
2,000	900	Yes.	1,000	100	.....	7
1,000	.....	No.	.....	.....	.....	8
8,500	500	No.	.....	.....	20 per cent inc. by changing positions....	9
3,000	250	No.	.....	.....	By union efforts reduced time 1½ hrs. a day.	10
.....	.....	No.	.....	.....	.....	11
2,000	300	No.	.....	.....	.....	12
1,200	600	Yes.	800	.....	Hours reduced by organization.....	13
.....	.....	Yes.	.....	.....	15 per cent increase through organization.	14
.....	.....	No.	300	.....	.....	15
8,000	.....	No.	.....	.....	10 per cent increase, better patronage.....	16
						17

for the days' work. 1 The wages quoted is the amount received weekly; in addition barber each week.

BLACKSMITHS.

\$ 1,000	.....	No.	.....	.....	None.....	18
.....	.....	.....	.....	.....	.....	19
2,500	.....	No.	.....	.....	None.....	20
4,000	.....	.....	.....	.....	25 cents a day raise	21
2,000	\$ 800	No.	.....	.....	35 cents a day through the I. B. of B.	22
1,000	.....	Yes.	\$ 650	\$ 650	35 cents a day through organization.....	23
.....	.....	Yes.	800	800	.....	24
.....	.....	Yes.	500	.....	Raised freely by employer.....	25
.....	.....	No.	.....	.....	1 hour less a day through organization....	26
.....	.....	No.	.....	.....	40 cents a day inc. through organization..	27

BOILERMAKERS.

\$2,000	\$ 500	Yes.	\$1,800	\$ 200	30c inc. a day on account of organization..	28
2,000	500	No.	.....	.....	25c inc. a day by request..	29
1,000	1,500	Yes.	2,000	.....	40c inc. a day through organization.....	30

WAGE EARNERS OF

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or worse.

BOOKBINDERS.

81	Cedar Rapids.....	9	\$ 8.00	Day.	\$ 880	None.	.....	Poor.
82	Cedar Rapids.....	9	15.00	Week.	780	.....	Good.	.....
83	a Davenport.....	9	13.50	Week.	675	.....	Good.	.....
84	Des Moines.....	9	14.00	Week.	650	\$ 250	Fair.	.....
85	b Des Moines.....	9	8.00	Day.	986	.....	Good.	.....
86	b Des Moines.....	9	8.00	Day.	864	200	.....	Bad.
87	b Sioux City.....	9	8.00	Day.	900	.....	Fair.	.....

a Blank book forwarder. b Paper rulers.

BRICKLAYERS.

88	Boone.....	9	\$ 4.50	Day.	\$1,000	None.	.....	.....
89	Council Bluffs.....	8	4.00	Day.	.....	\$ 250	.....	.....
40	Des Moines.....	8	4.00	Day.	1,100	200	.....	.....
41	Iowa City.....	9	4.15	Day.	.....	.....	.....	.....
42	Lyons.....	9	8.60	Day.	500	None.	.....	.....
48	Muscatine.....	9	4.05	Day.	.....	None.	.....	.....

BRICKMAKERS.

44	Des Moines.....	9	\$ 2.90	Day.	\$ 638	None.	.....	.....
45	Des Moines.....	12	1.75	Day.	.....	.....	.....	.....

BROOM MAKERS.

46	Des Moines.....	10	\$ 2.00	Day.	\$ 532	\$ 75	Good.	.....
47	Des Moines.....	10	18.25	Week.	655	\$ 100	Good.	.....
48	Dubuque.....	10	2.00	Day.	450	None.	.....	Bad.
49	Des Moines.....	10	1.75	Day.	.....	.....	.....	Bad.
50	Sioux City.....	9	2.00	Day.	.....	.....	.....	Bad.

BUTTON BLANK SAWYERS.

51	Muscatine.....	10	\$ 1.30	day.	\$ 800	None.	.....	Filthy.
52	Muscatine.....	10	1.00	day.	.....	.....	.....	Bad.

CARPENTERS.

53	a Burlington.....	9	\$.30	Hour.	\$ 250	.....	.....	.....
54	Centerville.....	10	2.50	Day.	805	None.	.....	.....
55	Culfax.....	10	.25	Hour.	.....	None.	.....	.....
56	Council Bluffs.....	8	2.40	Day.	840	.....	.....	.....
57	Council Bluffs.....	8	.35	Hour.	700	\$ 175	Good.	.....
58	b Corydon.....	10	2.50	Day.	750	150	Fair.	.....
59	Corydon.....	10	2.00	Day.	400	.....	.....	.....
60	b Creston.....	10	2.50	Day.	800	75	Good.	.....
61	Creston.....	9	2.70	Day.	610	100	Good.	.....
62	Fort Dodge.....	10	2.50	Day.	780	.....	Good.	.....
63	Iowa Falls.....	10	2.75	Day.	600	None.	Good.	.....
64	a Muscatine.....	10	2.25	Day.	325	.....	.....	.....
65	a Newton.....	10	2.00	Day.	320	100	Good.	.....
66	b Red Oak.....	10	3.00	Day.	700	None.	.....	.....
67	Osweego.....	10	2.50	Day.	612	100	.....	.....
68	Waterloo.....	10	.30	Hour.	.....	420	.....	.....
69	b Waterloo.....	10	3.50	Day.	650	.....	.....	.....
70	a Sioux City.....	9	2.75	Day.	425	.....	.....	.....

a Idle half the time, nothing to do. terial, and searching for work.

b Foremen and contractors. Carpenters

IOWA—CONTINUED.

Amount of insurance Carried.		The Home.			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of	Equity in		

BOOKBINDERS.

\$1,000	\$ 500	No.				81
	2,500	Yes.	\$3,500	\$2,500		82
8,000	1,100	Yes.	1,800	1,050		83
		Yes.	1,800	1,200	16½ per cent increase by request.	84
5,000	800	No.				85
3,000		No.				86
2,000	800	No.				87

BRICKLAYERS.

		No.				88
		Yes.	\$ 800			89
\$3,000	\$ 750	No.			10 per cent increase through union.	40
2,000	1,000	Yes.	\$1,500	\$1,000	\$1 00 per day increase through union.	41
1,000	500	Yes.	700	300	60c per day increase through union.	42
1,000		Yes.	2,500			43

BRICKMAKERS.

\$3,000		No.			5c per hour increase through union.	44
		Yes.	\$ 200			45

BROOM MAKERS.

	\$ 500	Yes.	\$1,600		7 per cent increase through union	46
\$2,000	500	No.			7 per cent increase through union	47
2,000		No.				48
		No.				49
		No.			1 hour less and 90c inc. a day thro' union	50

BUTTON BLANK SAWYERS.

None.		No.			8c a day increase through union.	51
		No.			½c a gross increase through union.	52

CARPENTERS.

\$2,000		No.				53
4,000		Yes.	\$1,500	\$1,000		54
1,000		No.				55
None.		No.				56
1,000		No.				57
1,000	\$ 800	Yes.	1,100	795	20c a day increase through union.	58
		No.			\$1.00 a day decrease. I moved from an organized into an unorganized locality.	59
8,000	500	Yes.	1,200			60
1,000	700	Yes.	1,000		7½ per cent increase through union.	61
2,000	1,300	Yes.	2,500	500		62
2,000	900	Yes.	1,400	800	10 per cent increase on request.	63
2,000		Yes.	1,000	1,000	25c a day increase.	64
1,000		Yes.	1,600			65
2,000		No.			50c a day increase through union.	66
2,000	1,500	Yes.	2,250	600	10 per cent increase through organization.	67
1,000	850	No.				68
2,000	800	Yes.	3,000	2,400	50c a day increase through union.	69
8,000					1 hr. less per day, 10 p. c. inc. through union	70

state they are idle from 20 to 70 days during year owing to bad weather, waiting for ma-

WAGE EARNERS

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or worse.

CAR BUILDERS, REPAIRERS AND

71	Cedar Rapids.....	a 10	\$.20	Hour.	\$ 531	None.	.....	Bad.
72	Cedar Rapids.....	a 10	.21 $\frac{1}{2}$	Hour.	550	None.	.....	Bad.
73	Centerville.....	a 10	.12 $\frac{1}{2}$	Hour.	300	\$ 50	.....	Poor.
74	Council Bluffs.....	a 10	.20	Hour.	580	.....	.....	.....
75	Council Bluffs.....	a 10	1.66	Day.	594	None.	.....	Poor.
76	Eagle Grove.....	9	.15	Hour.	450	.....	.....	Bad.
77	Fort Dodge.....	12	.16	Hour.	600	None.	Good.	.....
78	Fort Dodge.....	a 10	.14	Hour.	490	50	Good.	.....
79	Marshalltown.....	a 10	1.70	Day.	500	None.	.....	Bad.
80	b Marshalltown.....	a 10	b .25	Hour.	.....	250	.....	Bad.
81	Missouri Valley.....	a 10	.20	Hour.	550	.....	.....	Bad.
82	Missouri Valley.....	a 10	.20	Hour.	620	5 $\frac{7}{10}$	.....	Bad.
83	b Oelwein.....	a 10	b .28 $\frac{1}{2}$	Hour.	750	250	Good.	.....
84	Walsh.....	a 10	.18	Hour.	380	None.	.....	Filthy.
85	Sioux City.....	a 10	12.00	Week.	575	None.	.....	Poor.

a Employees in railroad car shops usually work the number of hours stated in sum department.

CIGAR MAKERS.

86	Burlington.....	8	a \$2.50	Day.	.....	None.	.....	Bad.
87	Cedar Rapids.....	8	a 2.00	Day.	.....	None.	Good.	.....
88	Council Bluffs.....	8	a 2.50	Day.	\$ 700	None.	Good.	.....
89	Council Bluffs.....	8	a 2.50	Da.	680	\$ 100	Good.	.....
90	Davenport.....	8	a 2.25	Day.	693	175	Fair.	.....
91	Dubuque.....	8	a 2.40	Day.	643	100	Good.	.....
92	Marshalltown.....	8	a 1.25	Day.	490	40	Good.	.....
93	Mt. Pleasant.....	8	a 1.75	Day.	438	None.	Good.	.....
94	Oskaloosa.....	8	a 2.00	Day.	5 5	None.	Fair.	.....
95	Oskaloosa.....	8	a 2.00	Da.	500	None.	Good.	.....
96	Sioux City.....	8	a 8.50	Day.	900	.....	Good.	.....
97	Sioux City.....	8	a 8.00	Day.	840	.....	Good.	.....

a Cigar makers work entirely on the piece-work system. The amounts given as the

CLERKS, POSTAL.

98	Des Moines.....	9	\$75.00	Month.	\$ 900	\$ 100	Good.	.....
99	Fort Dodge.....	9 $\frac{1}{2}$	50.00	Month.	600	250	Good.	.....
100	Keokuk.....	10 $\frac{1}{2}$	75.00	Month.	900	200	Good.	.....
101	Sioux City.....	8	90.00	Month.	1,100	500	Good.	.....
102	Sioux City.....	8	75.00	Month.	900	None.	Good.	.....
103	Waterloo.....	9	41.75	Month.	500	None.	Good.	.....
104	Waterloo.....	8	50.00	Month.	600	\$ 150	Good.	.....

CLERKS, RETAIL.

105	Boone a.....	e 10	\$40.00	Month.	\$ 480	.....	Good.	.....
106	Clinton b.....	e 12	12.00	Week.	620	.....	Good.	.....
107	Davenport c.....	e 10	.20	Hour.	600	\$ 75	Fair.	.....
108	Des Moines c.....	e 12	45.00	Month.	540	150	Good.	.....
109	Kokuk b.....	e 10	15.00	Week.	750	None.	Good.	.....
110	Lyons d.....	e 12 $\frac{1}{2}$	10.00	Week.	520	None.	Good.	.....
111	Marion b.....	e 14	11.00	Week.	540	\$ 120	Good.	.....
112	b Muscatine.....	e 10	50.00	Month.	600	250	Good.	.....
113	b Muscatine.....	e 10	4.00	Week.	.....	None.	Good.	.....

a Clothing clerk.
from 15 to 17 hours.

b Dry goods clerks.
f Lady clerk.

c Shipping clerks.

d Grocery

OF IOWA—CONTINUED.

Amount of Insurance Carried.		The Home.			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of.	Equity in.		

INSPECTORS IN RAILROAD SHOPS.

\$1,000		Yes.	\$1,700	\$1,800	25c a day increase after strike.	71
2,000		No.			45c a day increase after strike.	72
1,000		Yes.	1,000	250		78
2,000		Yes.	1,000			74
None.	\$1,150	Yes.	1,150	1,150		75
1,000		No.				76
1,000		No.			2½c an hour increase on account of strike.	77
1,000		No.			15c a day increase.	78
1,000		No.				79
1,000	1,000	Yes.	2,000	1,850		80
4,000	500	No.				81
2,000		No.			25c a day increase by constant demand.	82
		No.			25c a day increase through union.	83
250		No.				84
1,000	800	No.				85

mer, in winter the hours are 9 and sometimes 8 per day. b The highest rate paid in

CIGAR MAKERS.

\$2,000	\$ 5.0	No.				86
		No.				87
2,000		No.				88
		No.				89
	500	Yes.	\$4,000	\$4,000		90
		Yes.	1,200	1,200		91
200		Yes.	650			92
200	500	Yes.	800	150		93
2,000	250	No.				94
5,500		Yes.	2,000	2,000		95
2,000	1,000	Yes.	1,800	1,000		96
		Yes.	5,000	4,000		97

rate of wages per day is the average earnings per day.

CLERKS, POSTAL.

\$2,000	\$ 700	No.				98
2,000		No.				99
1,500		No.			\$100.00 a year Inc. by U. S. government.	100
5,000	2,000	Yes.	\$3,600	\$1,800	Wages were increased.	101
2,000	1,800	Yes.	3,000	3,000		102
1,500		Yes.	1,200	1,200	\$100.00 a year Inc. by U. S. government.	103
3,000		No.				104

CLERKS, RETAIL.

\$4,000		No.			10 per cent increase through experience.	105
3,000	\$ 500	No.				106
		Yes.	\$ 850		\$1.00 per week increase for asking.	107
		No.				108
2,000	1,000	Yes.	1,500	\$ 500	50 cents a day increase for the asking.	109
2,000	400	No.				110
2,000		No.			Receive 5 per cent of profits of firm in addition to wages.	111
2,000		No.			No, but have stock in company.	112
1,000		No.				113

clerks.e Number of hours given are for five days in week; on Saturdays clerks work

WAGE EARNERS OF

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or Worse.

COOKS, RESTAURANT.

114	Cedar Rapids.....	12	\$35 00	Month.		None.	Fair.	
115	Des Moines.....	18	15.00	Week	\$ 840			
116	Marshalltown.....	10	16.10	Month.			Fair.	

a Cooks work seven days a week. b Colored man worked only half time; women rule obtain free board, but not lodging; rarely laundry.

COOPERS.

117	Burlington.....	10	\$ 1.50	Day.	\$ 400	None.	Good.	
118	Cedar Rapids.....	10	2.00	Day.	590	None.	Good.	
119	Des Moines.....	10	2.80	Day.	645	None.	Good.	
120	Dubuque.....	10	2.25	Day.	550		Good.	
121	Dubuque.....	10	2.00	Day.	600		Good.	
122	Keokuk.....	10	2.25	Day.	600	\$ 50	Good.	
123	Ottumwa.....	10	2.60	Day.	450	None.	Fair.	
124	Ottumwa.....	a 8	2.00	Day.	548	100	Fair.	
125	Sioux City.....	10	3.00	Day.			Good	

a The eight hours mentioned here is on account of slack business, and not because

CONDUCTORS, RAILROAD.

126	Belle Plaine.....	10	\$ 3.00	Day.	\$1,092			
127	Boone.....	10	3.00	Day.	1,116	\$ 200		
128	Boone.....	5	120.00	Month.	1,400	200		
129	Clinton.....	8	120.00	Month.	1,440	350		
131	Colfax.....	9	57.00	Month.	578	200	Good.	
131	Des Moines.....	a	.03	Mile.	850	100	Fair.	
132	Dubuque.....	10	3.00	Day.	975	175		
133	Mason City.....	12	3.72	Day.	955	200		
134	Mason City.....	10	3.00	Day.	900	350		
135	Perry.....	10	3.00	Day.	900	24		
136	Waterloo.....	8	110.00	Month.	1,250			

a Hours very irregular.

ELECTRICAL WORKERS.

137	Des Moines.....	8	\$ 3.00	Day.	\$ 798	None.	Fair.	
138	Fort Dodge.....	10	3.00	Day.	900		Fair.	

ENGINEERS, LOCOMOTIVE.

139	Boone.....	a	\$ 3.70	Day.	\$ 1,500	\$ 370		
140	Boone.....	12	b 4.80	Day.	1,312	500		
141	Hurlington.....	a	b 3.50	Day.		100		
142	Cedar Rapids.....	8	b 3.50	Day.				
143	Clinton.....	a	b 5.00	Day.	1,500	1,000	c Good.	
144	Des Moines.....	a	b 4.00	Day.	1,100	300		c Filthy.
145	Des Moines.....	a	b 3.70	Day.	1,200	200		
146	Eagle Grove.....	6	b 5.00	Day.		1,000	c Good	
147	Fort Madison.....	10	b 4.00	Day.	1,200	300	c Good.	
148	Fort Madison.....	12	b 4.25	Day.	900	150		
149	Lake City.....	a	b 5.00	Day.				
150	Mason City.....	10	b 4.50	Day.	1,630	1,000		
151	Mason City.....	a	b 4.30	Day.	1,380	None.		
152	Missouri Valley.....	a	b 4.00	Day.	1,500	200		
153	Missouri Valley.....	12	b 92.00	Month.	1,100	250		
154	Oskaloosa.....	a	b .04	M le.				
155	Sioux City.....	a	b 3.70	Day.	975	250	c Good.	
156	Sioux City.....	a	b 3.85	Day.	1,400		c Good.	

a Working hours per day for locomotive engineers are very irregular and range from the average earnings per day; engineers are paid on a mileage basis from \$3.70 per 100 miles way freight trains. c The sanitary conditions refer to the round houses and accom-

IOWA—CONTINUED.

Amount of Insurance Carried.		The Home.			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of.	Equity in.		

COOKS, RESTAURANT.

\$1,000	.....	No.	.....	.....	Decrease of 50c. a day.....	114
.....	.....	.....	.....	.....	.....	115
.....	.....	.....	.....	.....	.....	116

displaced him, because they could be obtained cheaper. c Lady cook. Cooks as a

COOPERS.

\$1,000	.....	No.	.....	.....	20 per cent. decrease in wages.....	117
.....	\$ 600	Yes.	\$ 900	\$ 850	.....	118
1,000	.....	No.	.....	.....	.....	119
1,000	.....	No.	.....	.....	.....	120
.....	.....	Yes.	700	400	.....	121
.....	.....	No.	.....	.....	25c. a day increase through union.....	122
4,000	700	Yes.	700	.....	.....	123
8,000	200	.....	700	.....	.....	124
.....	.....	Yes.	700	.....	.....	125

an eight-hour day is the rule.

CONDUCTORS, RAILROAD.

\$3,000	\$1,600	Yes.	\$1,800	.....	.....	126
2,000	2,750	Yes.	5,500	.....	.....	127
8,000	500	No.	.....	.....	.....	128
8,000	.....	No.	.....	.....	.....	129
.....	.....	Yes.	900	900	Wages increased, promoted.....	130
2,000	.....	No.	.....	.....	.....	131
8,000	600	No.	.....	.....	1 per cent. increase through organization.....	132
8,000	.....	Yes.	2,000	2,000	10c. per 100 miles inc. through organization.....	133
2,000	2,000	Yes.	8,300	2,300	.....	134
4,000	.....	No.	.....	.....	.....	135
8,000	.....	Yes.	3,500	2,800	.....	136

ELECTRICAL WORKERS.

\$ 2,000	.....	No.	.....	.....	2 hours less per day, and 50 cents per day increase through union.....	137
2,000	.....	No.	.....	.....	.....	138

ENGINEERS, LOCOMOTIVE.

\$ 3,000	\$ 1,200	Yes.	\$ 3,000	\$ 3,000	Wage decreased, by more work being demanded for same rate.....	139
4,500	500	Yes.	1,500	1,500	.....	140
1,500	500	No.	.....	.....	.....	141
8,000	.....	Yes.	2,900	2,800	15c. per 100 miles increase through B. of L. E.....	142
8,000	.....	Yes.	3,000	3,000	.....	143
750	400	No.	.....	.....	.....	144
2,250	.....	No.	.....	.....	.....	145
7,500	10,000	Yes.	6,000	6,000	5 per cent increase through B. of L. E.....	146
4,500	600	No.	.....	.....	7 1/2 per cent increase through B. of L. E.....	147
8,500	500	No.	.....	.....	25c per 100 miles increase through B. of L. E.....	148
8,500	8,000	Yes.	5,000	5,000	.....	149
7,500	.....	Yes.	3,500	3,500	10 per cent increase through B. of L. E.....	150
7,700	8,000	Yes.	4,000	2,000	.....	151
8,500	.....	No.	.....	.....	.....	152
4,000	900	Yes.	1,200	.....	.....	153
8,000	1,200	No.	.....	.....	Secured increase of wages through B. of L. E.....	154
8,000	1,800	Yes.	1,400	900	.....	155
5,500	1,400	Yes.	3,200	2,500	15c a day increase through B. of L. E.....	156

8 hours for some passenger runs to 30 hours on way freights. b The wages quoted are on small engines in passenger service to \$4.50 per 100 miles on the largest engines on local modations at terminal points.

WAGE EARNERS

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or worse.

ENGINEERS, STATIONARY.

157	b Albia.....	a 9	\$ 55.00	Month.	\$ 600	.....	.....	Bad.
158	Cedar Rapids.....	a 9	100.00	Month.	1,200	....	Fair.	.....
159	c Des Moines.....	a 8	120.00	Month.	1,440	\$ 1,250	Fair.	.....
160	Des Moines.....	a 11	50.00	Month.	600	None.	Good.	.....
161	b Des Moines.....	a 11	65.00	Month.	780	.....	.....	.....
162	Dubuque.....	a 10	.20	Hour.	600	None.	Good.	.....
163	b Hocking.....	a 9	70.00	Month.	840	None.	.....	.....
164	Hopeville.....	a 12	2.25	Day.	720	400	.....	.....
165	Marshalltown.....	a 12	100.00	Month.	1,200	.....	.....	.....
166	Waterloo.....	a 12	50.00	Month.	425	.....	.....	.....
167	Waterloo.....	a 10	.20	Hour.	600	75	Good.	.....

a Stationary engineers usually work Sundays attending to necessary repairs on their accident and casualty company.

FIREMEN, LOCOMOTIVE.

168	Boone.....	a	b\$2.60	Day.	\$ 750	None.	Fair.	.....
169	Boone.....	a	b 2.60	Day.	580	\$ 150	Fair.	.....
170	Des Moines.....	9	b 2.70	Day.	900	300	.....	.....
171	Ca'mar.....	11	b 2.20	Day.	900	None.	.....	Poor.
172	Walsh.....	12	b 2.70	Day.	720	None.	.....	.....
173	Waterloo.....	12	b 2.60	Day.	.....	None.	.....	.....
174	c Des Moines.....	12	b 2.25	Day.	700	70	.....	Bad.

a Hours for locomotive firemen are very irregular, ranging from 10 hours on regular on a mileage basis \$3.25 for 100 miles on smaller engines, and \$2.50 on the larger ones. Fire man; they are employed 365 days per year, and as a rule work 12 hours per day.

HARNESS MAKERS.

175	Boone.....	10	b\$2.00	Day.	\$ 530	.....	Fair.	.....
176	Davenport.....	a 8	b 3.00	Day.	850	\$ 400	Good.	.....
177	Des Moines.....	10	b 2.25	Day.	675	None.	Fair.	.....
178	Oskaloosa.....	10	b 2.00	Day.	600	.....	Fair.	.....

a Citizens of Davenport employed at United States arsenal at Rock Island. b

LABORERS, BUILDING.

179	Des Moines.....	9	\$10.50	Week.	\$ 400	None.	.....	Bad.
180	Creston.....	9	10.80	Week.	400	None.	Good.	.....
181	Keokuk.....	10	1.50	Day.	366	None.	Good.	.....
182	Ottumwa.....	9	2.00	Day.	500	.....	.....	.....
183	Ottumwa.....	9	1.50	Day.	430	.....	Fair.	.....
184	Council Bluffs.....	10	1.50	Day.	417	.....	.....	.....
185	Muscatine.....	10	1.50	Day.	.....	.....	.....	.....

OF IOWA—CONTINUED.

Amount of insurance carried.		The Home.			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of	Equity in.		

ENGINEERS, STATIONARY.

.....	.....	No.	.....	.....	17 cents a day increase and 8 hours less per day through W. M. W. of A.	157
\$ 4,000	\$ 800	No.	.....	.....	\$24.00 per month increase; valuable service recognized by employer	158
3,000	1,000	Yes.	\$ 2,500	\$ 2,500	5 per cent increase by making services more valuable to employer	159
2,500	.....	No.	.....	.....	.....	160
2,500	1,400	Yes.	2,000	.....	.....	161
1,000	.....	No.	.....	.....	8 hours less per day through miners union.	162
1,000	.....	No.	.....	.....	.....	163
1,500	.....	No.	.....	.....	.....	164
1,500	.....	No.	.....	.....	.....	165
3,000	.....	No.	.....	.....	.....	166
.....	.....	No.	.....	.....	.....	167

boilers and machinery.

b Hoisting engineers at coal mines.

c Inspector for

FIREMEN, LOCOMOTIVE.

\$ 1,500	.....	No.	.....	.....	.....	168
2,500	.....	No.	.....	.....	.....	169
1,000	.....	Yes.	\$2,000	\$ 800	5c per 100 miles inc. through B. of L. F.	170
3,400	.....	No.	.....	.....	.....	171
1,500	.....	No.	.....	.....	.....	172
1,500	.....	No.	.....	.....	5c per 100 miles inc. through B. of L. F.	173
.....	.....	No.	.....	.....	.....	174

runs to 28 and over on extra and way freight trains.

b Locomotive firemen are paid men in yards on switch engines receive \$1.75 per day of 11 hours.

c Stationary fire-

HARNES MAKERS.

\$ 2,000	\$ 200	No.	.....	.....	.....	175
.....	.....	No.	.....	.....	2½ per cent increase through organization	176
.....	500	No.	.....	.....	25 cents a day increase through union	177
.....	.....	No.	.....	.....	2½ per cent increase through union	178

Average earnings per day; harness makers are usually employed on the piece work system.

LABORERS, BUILDING.

\$ 1,000	.....	Yes.	\$ 900	\$ 700	.....	179
5,000	\$ 800	No.	.....	.....	.....	180
118	.....	No.	.....	.....	.....	181
1,000	.....	No.	.....	.....	1 hour less per day; 25c a day inc. through union	182
1,000	.....	No.	.....	.....	.....	183
.....	.....	.....	.....	.....	.....	184
.....	.....	.....	.....	.....	.....	185

WAGE EARNERS

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where Employed.	
			Rate.	Per.			Good or fair.	Bad or worse.

MACHINISTS AND HELPERS.

186	Cedar Falls	10	\$ 2.85	Day.	\$ 600		Fair.	.....
187	a Cedar Rapids	10	1.70	Day.		\$ 25	Good.	.....
188	Centerterville	10	.24	Hour.	800		Bad.	.....
189	a Clinton	10	.15	Hour.	860	None.	Good.	.....
190	Creston	10	3.00	Day.			Good.	.....
191	Davenport	10	2.75	Day.	838	None.	Good.	.....
192	b Des Moines	9	.85	Hour.	950	100		.....
193	a Des Moines	10	.12	Hour.			Fair.	.....
194	Dubuque	10	1.25	Day.			Good.	.....
195	Jefferson	9	.80	Hour.	660		Good.	.....
196	Marshalltown	10	2.95	Day.	880	800		Bad.
197	Marshalltown	10	2.95	Day.	660	100		Bad.
198	Missouri Valley	10	3.20	Day.		None.		Filthy.
199	Missouri Valley	10	3.00	Day.	780	200		Filthy.
200	Muscatine	10	2.75	Day.	600	100	Good.	.....
201	Muscatine	10	3.00	Day.	790	150	Good.	.....
202	Oelwein	10	3.20	Day.	790	250	Good.	.....
203	Oelwein	10	3.20	Day.	800	275	Good.	.....
204	Ottumwa	10	2.50	Day.	755	None.		Bad.
205	Ottumwa	10	2.75	Day.		200		.....
206	Sioux City	10	3.15	Day.	840	300	Fair.	.....
207	Waterloo	10	3.05	Day.	800	None.	Good.	.....

a Machinist apprentices; machinists employed by railroad companies usually work contract shops of Des Moines was secured by mutual agreement between employers and

METAL WORKERS, SHEET AND TIN.

208	Council Bluffs	9	.85	Hour.	\$ 920	None.	Good.	.....
209	Des Moines	8	\$ 2.70	Day.	840	None.	Good.	.....
210	Ottumwa	9	1.75	Day.	500		Bad.	.....
211	Sioux City	9	2.70	Day.	800	None.	Good.	.....

MILL MACHINE HANDS, SAW MILLS.

212	Burlington	a 10	\$ 2.25	Day.	\$ 625	\$ 55	Good.	.....
213	Cedar Rapids	a 10	1.50	Day.	450		Good.	.....
214	Cedar Rapids	a 10	.22	Hour.	648		Fair.	.....
215	Clinton	a 10	.17	Hour.	520	48		Bad.
216	Clinton	a 10	2.00	Day.	500	50	Good.	.....
217	Davenport	a 10	1.75	Day.			Good.	.....
218	Keokuk	a 10	2.25	Day.			Good.	.....
219	Lyons	a 10	1.75	Day.	446	None.		Bad.
220	Lyons	a 10	1.75	Day.	385	60		Bad.
221	Muscatine	a 10	1.50	Day.	405		Good.	.....
222	Muscatine	a 10	2.00	Day.	600	None.		Bad.

a Length of work day in summer; mill machine men usually work a shorter time in

OF IOWA—CONTINUED.

Amount of Insurance Carried.		The Home.			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of.	Equity in.		

MACHINISTS AND HELPERS.

\$ 1,000		No.			5 per cent increase; personal effort.	186
		No.			25 cents a day increase on account of strike	187
		No.			1 cent a day increase; by petition	188
		No.			25c. a day increase; apprentice promotion.	190
2,000	\$ 700	Yes.	\$ 900	\$ 900	Piece work is the curse here	190
2,000	1,000	Yes.	3,500	2,000		191
\$ 6,500	\$ 500	No.			5 cents an hour increase; shorter day made	192
		No.			a demand for men	193
		No.				194
2,000		No.			1 hour less per day; 50c an hour increase	195
1,000	850	Yes.	1,000	815	20 cents a day increase; through union	196
		Yes.	1,200		20 cents a day increase; through union	197
		Yes.	3,000	3,000	45c a day increase; through organization	198
2,000	1,200	Yes.	1,500	1,500	25c a day increase; through organization	199
1,000		No.			7½ per cent increase by asking for it	200
4,500	500	No.			20 per cent inc.; freely given by employer.	201
1,000		No.			45c a day increase; through organization	202
5,000	600	Yes.	1,200	600	11 per cent increase; through organization	203
2,000	600	No.				204
1,000	800	No.			25c a day increase; through organization	205
2,000		No.			25c a day increase; through organization	206
2,000		No.			30c a day increase; through organization	207

10 hours per day in summer, and 8 or 9 hours in winter. b The nine-hour day in employes, May, 1901.

METAL WORKERS, SHEET AND TIN.

\$ 2,000	\$ 400	No.			22½ cents a day increase; through union.	208
		No.			2 hours less per day; 20 cents more wages.	209
		No.				210
2,000	400	No.			20 cents more wages; 1 hour less.	211

MILL MACHINE HANDS, SAW MILLS.

\$ 2,000		Yes.	\$1,200		Increase of wages pending	212
2,000	\$1,000	No.			25 cents per day increase	213
		No.				214
2,800		No.			10 cents a day increase; deserved it	215
	400	No.				216
2,000	600	Yes.	900		5 per cent increase by asking for it.	217
		No.				218
2,000		No.			10 cents per day increase; voluntarily	219
		No.			10 cents per day increase; by demand	220
1,000	875	Yes.	400	\$ 825		221
2,000	1,000	Yes.	900	400		222

winter—8 or 9 hours.

WAGE EARNERS

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings per year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or worse.

MINERS.

223	a Altoona.....	8	\$ 2.50	Day.	\$ 490	\$ 82	.....	Poor.
224	a Altoona.....	8	1.50	Day.	.....	None.	.....	Poor.
225	b Beacon.....	8	2.00	Day.	450	.....	.....	Poor.
226	c Brazil.....	8	2.25	Day.	420	50	.....	.....
227	b Bussey.....	8	2.50	Day.	.....	200	.....	Poor.
228	b Bussey.....	8	2.00	Day.	424	.....	Fair.	.....
229	b Bussey.....	8	2.00	Day.	450	.....	.....	Poor.
230	d Centerville.....	8	2.10	Day.	497	.....	Fair.	.....
231	d Centerville.....	8	2.27	Day.	490	None.	Fair.	.....
232	c Cincinnati.....	8	.80	Day.	208	None.	.....	Bad.
233	b Coalfield.....	8	2.25	Day.	.....	None.	.....	Poor.
234	Colfax.....	8	3.00	Day.	600	None.	.....	.....
235	c Deas.....	8	1.80	Day.	490	50	.....	Bad.
236	a Des Moines.....	8	2.00	Day.	375	.....	.....	.....
237	a Des Moines.....	8	1.90	Day.	250	.....	.....	Poor.
238	a Des Moines.....	8	1.75	Day.	.....	.....	.....	Poor.
239	c Diamond.....	8	1.75	Day.	256	.....	.....	Bad.
240	Eveland.....	8	1.60	Day.	341	None.	.....	.....
241	/ Fort Dodge.....	9 1/2	2.25	Day.	300	None.	.....	Bad.
242	/ Fort Dodge.....	8	2.00	Day.	.....	.....	.....	Bad.
243	b Hamilton.....	8	2.15	Day.	500	25	.....	.....
244	c Jerome.....	8	2.00	Day.	400	.....	.....	.....
245	c Jerome.....	8	2.15	Day.	560	.....	.....	.....
246	g Lehigh.....	8	2.25	Day.	600	None.	Good.	.....
247	b Lost Creek.....	8	3.00	Day.	648	.....	.....	Bad.
248	b Lost Creek.....	8	2.25	Day.	596	.....	.....	.....
249	a Morgan Valley.....	8	2.15	Day.	602	.....	.....	.....
250	c Mystic.....	8	2.00	Day.	438	.....	.....	.....
251	c Mystic.....	8	2.00	Day.	450	None.	.....	Poor.
252	b Oakaloosa.....	8	3.25	Day.	900	200	Fair.	.....
253	Ottumwa.....	8	2.15	Day.	600	.....	.....	.....
254	Ottumwa, South.....	8	2.25	Day.	600	.....	.....	.....
255	c Seymour.....	8	2.00	Day.	400	25	.....	.....
256	c Walsh.....	8	2.75	Day.	510	None.	.....	Poor.
257	b Willard.....	8	2.25	Day.	638	None	.....	.....
258	b Willard.....	8	2.50	Day.	620	.....	.....	.....
259	d Woodward.....	8	1.75	Day.	428	.....	.....	.....

The wages quoted are the average earnings per day. Miners dig coal by contract miners; g, 1.00. There was a small increase on these prices in 1903. Miners report

MOULDERS, IRON.

260	Burlington.....	10	\$ 2.75	Day.	\$ 750	.....	Good.	.....
261	Cedar Rapids.....	10	15.00	Week.	775	\$ 100	Fair.	.....
262	Davenport.....	8	2.75	Day.	841	425	Good.	.....
263	Keokuk.....	10	2.75	Day.	680	100	Good.	.....
264	Marshalltown.....	10	2.25	Day.	575	65	.....	Poor.

PAINTERS AND PAPER HANGERS.

265	Burlington.....	9	\$ 2.50	Day.	\$ 472	\$ 200	.....	.....
266	Cedar Rapids.....	10	2.25	Day.	520	None.	.....	.....
267	Clinton.....	9	2.25	Day.	500	None.	.....	.....
268	Creston.....	9	3.00	Day.	600	None.	.....	.....
269	Jefferson.....	10	2.50	Day.	.....	None.	.....	.....
270	Keokuk.....	9	.25	Hour.	400	None.	.....	.....
271	Marshalltown.....	10	10.50	Week.	480	100	.....	Bad.
272	Ottumwa.....	9	2.50	Day.	605	None.	.....	Poor.
273	Waterloo.....	10	2.50	Day.	360	None.	Good.	.....

The work of house painting is very irregular, amount of time lost during year range

OF IOWA—CONTINUED.

Amount of Insurance Carried.		The Home			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of.	Equity in.		

MINERS.

.....	.....	No.	.....	.....	.....	228
.....	.....	No.	.....	.....	.....	224
.....	.....	Yes.	\$ 800	\$ 270	.....	225
.....	.....	Y s.	400	.....	.....	226
.....	\$ 500	Yes.	700	.....	.....	227
.....	.....	Yes.	.....	.....	.....	228
.....	.....	Yes.	600	200	.....	229
.....	.....	Yes.	650	175	.....	230
.....	.....	Yes.	600	.....	.....	231
.....	.....	No.	.....	.....	.....	232
.....	500	Yes.	150	.....	.....	233
.....	300	No.	.....	.....	.....	234
.....	500	Yes.	1,200	700	.....	235
.....	.....	No.	.....	.....	.....	236
.....	.....	No.	.....	.....	.....	237
.....	.....	No.	.....	.....	.....	238
.....	.....	No.	.....	.....	.....	239
.....	.....	No.	.....	.....	.....	240
.....	.....	No.	.....	.....	.....	241
\$1,000	.....	No.	.....	.....	.....	242
.....	500	Yes.	1,800	800	.....	243
200	450	Yes.	1,600	.....	.....	244
.....	.....	No.	.....	.....	.....	245
.....	.....	No.	.....	.....	.....	246
.....	.....	No.	.....	.....	.....	247
155	.....	No.	.....	.....	.....	248
.....	.....	Yes.	150	.....	12½ p.c. inc., earned during yr., more work	249
.....	.....	Yes.	450	.....	.....	250
.....	.....	No.	.....	.....	.....	251
.....	.....	Yes.	1,500	1,600	.....	252
.....	.....	Yes.	500	.....	.....	253
2,000	.....	No.	.....	.....	.....	254
1,000	500	Yes.	800	.....	.....	255
.....	.....	Yes.	600	800	.....	256
.....	.....	No.	.....	.....	.....	257
.....	.....	No.	.....	.....	.....	258
.....	.....	No.	.....	.....	.....	259

at the following price: a, 90c per ton; b, 85c; c, 95c; d, \$1.05; f, 45c, gypsum
 their work very irregular; many say they were idle from 60 to 100 days in a year.

MOULDERS, IRON.

\$2,000	.....	No.	.....	.....	35c a day inc. soon as we talked organization	260
.....	.....	No.	.....	.....	.....	261
.....	\$1,050	Yes.	\$2,500	\$ 2,500	25c a day increase voluntarily given	262
200	400	No.	.....	.....	10 per cent increase by asking for it..	263
.....	.....	No.	.....	.....	.....	264

PAINTERS AND PAPERHANGERS.

\$ 100	.....	No.	.....	.....	.....	265
1,000	.....	Yes.	\$1,000	\$ 550	.....	266
1,000	.....	No.	.....	.....	1 hour less and 25c per day increase through union	267
4,600	.....	No.	.....	.....	1 hour less and 90c increase per day through union	268
.....	\$ 900	Yes.	600	.....	20 per cent increase through union	269
2,000	.....	No.	.....	.....	1 hour less, 25c per day more by strike	270
.....	300	Yes.	600	600	.....	271
.....	.....	.....	.....	.....	1 hour less per day, no decrease in pay through union	272
2,000	300	No.	.....	.....	50c a day increase through union	273

from one to six months.

WAGE EARNERS

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or worse.
PLASTERERS.								
274	Fort Dodge	10	\$ 3.00	Day.	\$ 350	None.	.....	.....
275	Fort Madison	10	3.00	Day.	450	None.	.....	.....
276	Iowa City	8	4.00	Day.	550	\$ 250	.....	.....
277	Ottumwa	9	3.15	Day.	600	None.	.....	.....
278	Waterloo	9	.40	Hour.	625	None.	.....	.....

Plasterers report no work from 75 to 150 days during year.

PLUMBERS.

279	Burlington	8	\$ 2.25	Day.	\$ 574	.....	.....	.....
280	Cedar Rapids	8	3.00	Day.	800	\$ 300	Good.	.....
281	Des Moines	8	21.00	Week.	1,092	.....	.....	.....
282	Ottumwa	9	3.00	Day.	850	100	.....	Poor.

PRESSMEN, PRINTING.

283	Des Moines	9	\$16.00	Week.	\$ 800	\$ 60	Good.	.....
284	Dubuque	9	18.00	Week.	800	.....	.....	.....
285	Dubuque	a 12	8.50	Day.	.....	.....	Fair.	.....
286	Ottumwa	9	7.00	Week.	.....	.....	Fair.	.....

a - Only one man to do the work, overtime is necessary. b Pressman apprentice.

PRINTERS.

287	Burlington	9	\$ 16.00	Week.	\$ 780	\$ 25	Fair.	.....
288	a Burlington	8	18.50	Week.	900	75	Good.	.....
289	Cedar Rapids	9	16.00	Week.	600	None.	Fair.	.....
290	Cedar Rapids	9	14.00	Week.	725	70	Good.	.....
291	a Clinton	9	20.00	Week.	1,040	.....	Fair.	.....
2-2	a Council Bluffs	8	3.50	Day.	1,100	None.	Good.	.....
293	Corydon	10	1.50	Day.	400	None.	.....	.....
294	Des Moines	9	14.00	Week.	700	None.	.....	Bad.
295	Des Moines	9	16.00	Week.	680	None.	.....	Bad.
296	Des Moines	9	.29	Hour.	770	.....	Good.	.....
297	a Dubuque	8	15.00	Week.	750	.....	.....	Poor.
298	Iowa City	9	12.00	Week.	540	125	.....	Poor.
299	a Keokuk	9	16.00	Week.	814	None.	.....	Poor.
300	Muscatine	9	13.00	Week.	676	100	Good.	.....
301	Muscatine	9	13.00	Week.	.....	None.	.....	Poor.
302	Sioux City	9	8.75	Week.	.....	166	Good.	.....
303	a Sioux City	8	8.20	Day.	1,000	.....	Fair.	.....
304	Waterloo	9	12.00	Week.	560	.....	Good.	.....

a Linotype operators, as a rule, work 8 hours for a day's work, hand compositors and

SECTION FOREMEN, RAILROAD.

305	Berwick	10	\$ 45.00	Month.	\$ 540	None.	Good.	.....
306	Cedar Rapids	10	45.00	Month.	510	\$ 75	.....	.....
307	Iowa City	10	45.00	Month.	540	None.	.....	.....
308	Nira	10	45.00	Month.	540	150	Good.	.....

OF IOWA.—CONTINUED.

Amount of Insurance Carried.		The Home.			Variation in Hours and Wages Since 1900.	Mar- ginal num- ber.
Life.	Fire	Owned?	Value of.	Equity in.		

PLASTERERS.

.....	\$ 800	Yes.	\$1,200	\$1,200	.....	274
.....	800	Yes.	1,200	1,200	.....	275
.....	800	No.	.....	900	2 hours less per day, \$1.00 per day increase through union	276
\$2,000	1,400	Yes.	1,000	.....	.....	277
2,000	.....	No.	.....	.....	1 hour less per day, 60c day increase through union	278

PLUMBERS.

.....	.....	No.	.....	.....	2 hours less per day	279
.....	.....	Yes.	\$1,200	\$ 600	2 hours less per, 75c a day inc. by strike...	280
\$ 200	\$ 500	No.	.....	.....	.....	281
.....	.....	No.	.....	.....	.....	282

PRESSMEN, PRINTING.

.....	.....	Yes.	\$ 1,500	\$ 1,500	.....	283
None.	.....	No.	.....	.....	.....	284
.....	.....	No.	.....	.....	.....	285
\$1,100	.....	No.	.....	.....	Got increase as apprentice	286

PRINTERS.

\$ 2,500	\$ 600	No.	.....	.....	16% a day inc., voluntary by employers ..	287
4,000	700	Yes.	\$ 1,400	.....	8% a day inc., through I. T. U	288
2,000	.....	No.	.....	.....	\$1.00 per week inc., through I. T. U	289
.....	.....	No.	.....	.....	7% per cent. inc., through I. T. U	290
7,000	1,800	No.	.....	.....	.....	291
.....	.....	Yes.	2,800	.....	.....	292
.....	500	No.	.....	.....	.....	293
1,000	800	Yes.	1,000	\$ 800	got \$4.00 per week inc. came from Illinois.	294
1,000	590	No.	.....	.....	.....	295
2,000	.....	No.	.....	.....	17c. a day inc. through union	296
.....	1,200	Yes.	2,000	1,000	.....	297
8,000	1,000	Yes.	1,500	900	.....	298
1,000	.....	No.	.....	.....	\$1.00 per week inc. through union	299
2,000	.....	No.	.....	.....	8 per cent inc. through I. T. U	300
1,000	.....	No.	.....	.....	.....	301
8,000	.....	Yes.	3,000	3,000	.....	302
1,000	.....	Yes.	2,000	800	1 hour less per day through strike	303

job printers 9 hours.

SECTION FOREMEN, RAILROAD.

\$ 1,000	\$ 600	Yes.	\$ 800	.....	.....	305
1,000	.....	No.	.....	.....	.....	306
2,000	.....	No.	.....	.....	.....	307
.....	.....	Yes.	500	.....	.....	308

WAGE EARNERS

Marginal number.	Locality Where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings per year.	Sanitation, Where Employed.	
			Rate.	Per			Good or fair.	Bad or worse.

STEREOTYPERS.

809	Des Moines.....	8	\$ 11.40	Week.	\$ 570	\$ 60	.....	Poor.
810	Des Moines.....	9	13.50	Week.	700	125	.....	Poor.
811	Sioux City.....	6	18.00	Week.	931	.....	Good.	.....
812	Sioux City.....	6	2.25	Day.	648	None.	Good.	.....

STONE CUTTERS.

818	Cedar Rapids.....	9	\$.89	Hour.	\$ 1,011	\$ 165	Good.	.....
814	Fairfield.....	9	.85	Hour.	300	None.	.....	.....
815	Marshalltown.....	9	.85	Hour.	500	None.	.....	.....

SWITCHMEN AND TRAIN BRAKEMEN.

816	Burlington.....	a	\$ 1.92	Day.	\$ 500	.....	.....	.....
817	Carroll.....	9	2.75	Day.	325	None	.....	.....
813	Cedar Rapids.....	10	2.85	Day.	735	None.	.....	Poor.
819	Oreston.....	a	1.75	Day.	600	None.	.....	.....
820	Des Moines.....	7	45.00	Month.	540	None.	Good.	.....
821	Eagle Grove.....	10	2.50	Day.	864	.....	Good.	.....
822	Eagle Grove.....	a	2.7.	Day.	850	.....	.....	.....
823	Estherville.....	11	2.10	Day.	650	\$ 100	.....	Poor.
824	Fort Madison.....	a	2.30	Day.	700	None.	.....	.....
825	Fort Dodge.....	11	2.25	Day.	720	.....	.....	.....
826	Mari n.....	10	52.00	Month.	.....	None.	.....	.....
827	Moulton.....	12	2.50	Day.	800	None.	.....	.....
828	Moulton.....	12	60.00	Month.	675	100	Good.	.....
829	Oelwein.....	12	.29	Hour.	850	None.	.....	Poor.
830	Perry.....	a	2.00	Day.	600	100	.....	.....
831	Perry.....	a	2.00	Day.	660	None.	.....	.....
832	Valley Junction.....	14	8.75	Day.	.....	None.	.....	.....

a Hours very irregular ranging from 6 to 24 per day. The wages quoted are average and \$2.25 per 100 miles.

TAILORS.

838	Cedar Rapids.....	10	\$ 2.00	Day.	\$ 475	.....	Good.	.....
834	Davenport.....	10	1.75	Day.	550	\$ 100	Good.	.....
835	Des Moines.....	a	15.50	Week.	800	.....	Good.	.....
836	Keokuk.....	10	2.50	Day.	700	100	.....	Bad.
837	Ottumwa.....	10	2.00	Day.	500	None.	Good.	.....
838	Waterloo.....	10	15.00	Week.	600	20	Good.	.....
839	Waterloo.....	10	2.50	Day.	575	None.	Good.	.....

a Hours irregular. The tailors' trade is quite irregular and controlled largely by the averages while employed.

TEAM DRIVERS.

840	aBurlington.....	12	\$ 4.00	Day.	\$ 600	.....	.....	.....
841	bCedar Rapids.....	10	10.00	Week.	500	None.	.....	.....
842	aCouncil Bluffs.....	9	8.50	Day.	.....	\$ 100	.....	.....
843	cDes Moines.....	10	40.00	Month.	480	.....	.....	.....
844	aDes Moines.....	9	8.50	Day.	880	.....	.....	.....
845	bSioux City.....	11	10.00	Week.	520	None.	.....	.....

a Including team personally owned. b Drivers who do not own team. c Drivers

OF IOWA—CONTINUED.

Amount of Insurance Carried.		The Home			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of.	Equity in.		

STEREOTYPERS.

\$ 1,000	\$ 1,000	Yes.	\$ 1,500	\$ 600	.....	809
.....	700	Yes.	1,200	.....	.....	810
2,000	850	No.	.....	.....	.....	811
1,000	400	No.	.....	.....	25c. a day inc. through union.....	812

STONE CUTTERS.

\$ 3,000	\$ 800	No.	.....	.....	.....	813
.....	.....	No.	.....	.....	.....	814
.....	.....	No.	.....	.....	.....	815

SWITCHMEN AND TRAIN BRAKEMEN.

\$3,000	.....	Yes.	.....	.....	.....	816
1,200	.....	No.	.....	.....	25c per 100 miles increase through B. R. T.	817
1,200	.....	No.	.....	.....	.....	818
1,200	.....	No.	.....	.....	.....	819
1,200	\$ 200	No.	.....	.....	75c a day decrease by railroad company	820
2,800	.....	No.	.....	.....	.....	821
1,200	.....	No.	.....	.....	20c per 100 miles increase through B. R. T.	822
1,200	.....	Yes.	\$ 800	\$ 400	.....	823
8,200	.....	No.	.....	.....	.....	824
1,400	800	No.	.....	.....	.....	825
2,400	.....	Yes.	1,800	1,100	.....	826
1,200	.....	No.	.....	.....	\$5.00 per month inc. through organization.	827
2,000	500	No.	.....	.....	\$5.00 per month inc. through organization.	828
1,200	.....	No.	.....	.....	24c per day increase through union.	829
1,200	.....	Yes.	1,800	1,800	Less work same rate of pay.	830
1,200	400	No.	.....	.....	.....	831
.....	.....	No.	.....	.....	25c per 100 miles increase through B. R. T.	832

earnings per day, according to the number of miles run. The mileage basis of pay is \$2.00

TAILORS.

\$ 700	\$ 500	No.	.....	.....	.....	833
1,700	1,500	Yes.	\$1,700	.....	.....	834
.....	.....	.....	.....	.....	6 per cent increase through strike.....	835
2,000	850	No.	.....	.....	.....	836
1,100	800	No.	.....	.....	.....	837
2,000	2,000	Yes.	1,800	200	10 per cent increase through union.....	838
.....	.....	Yes.	4,000	8,000	.....	839

seasons, tailors report 40 to 120 idle days a year. The daily and weekly wages quoted are

TEAM DRIVERS.

.....	.....	No.	.....	.....	\$1.00 a day increase through union.....	840
\$1,250	.....	No.	.....	.....	.....	841
.....	\$1,850	Yes.	\$2,000	\$2,000	.....	842
.....	.....	No.	.....	.....	.....	843
.....	.....	No.	.....	.....	1 hour less per day, 50 cents a day increase through union.....	844
1,000	.....	No.	.....	.....	.....	845

for express company.

WAGE EARNERS OF

Marginal number.	Locality where Employed.	Working hours per day.	Wages.		Total earnings for year.	Total savings for year.	Sanitation, Where employed.	
			Rate.	Per			Good or fair.	Bad or worse

TELEGRAPH OPERATORS AT RAILWAY STATIONS.

346	Arispe	12	\$ 1.50	Day	\$ 600	None.	Good	.....
347	Barney	12	47.00	Month.	560	.....	.....	.....
348	Beacon	14	45.00	Month.	540	None.	Bad.	.....
349	Belmond	11	40.00	Month.	480	None.	Good.	.....
350	Benton	12	45.00	Month.	540	\$ 50	Good	.....
351	Blockton	12	75.00	Month.	880	100	Good.	.....
352	Bondurant	16	55.00	Month.	880	None	.....	.....
353	Cedar Falls	11	75.00	Month.	900	.....	Good.	.....
354	Cumming	12	40.00	Month.	480	124	Good	.....
355	Dunkerton	12	20.00	Month.	.....	75	.....	.....
356	Coon Rapids	12	45.00	Month.	580	None.	Fair.	.....
357	Des Moines	12	50.00	Month.	600	None	Fair.	.....
358	Dewar	12	1.50	Day.	450	150	Good.	.....
359	Dubuque	12	45.00	Month.	540	150	Good.	.....
360	Gladbrook	12	20.00	Month.	.....	None.	Fair.	.....
361	Green Mountain	12	25.00	Month.	600	.....	Good.	.....
362	Hanley	13	85.00	Month.	.....	None.	Good.	.....
363	Herndon	12	50.00	Month.	545	None.	Fair.	.....
364	Hudson	16	50.00	Month.	600	300	Good.	.....
365	Huxley	14	40.00	Month.	.....	None.	Good.	.....
366	Ira	12	45.00	Month.	540	None.	Good.	.....
367	Knowlton	12	30.00	Month.	400	.....	Good.	.....
368	Lacey	12	40.00	Month.	480	100	Fair.	.....
369	Lorimer	13	75.00	Month.	90	.....	.....	.....
370	Luray	12	42.00	Month.	500	.....	Good	.....
371	Manning	12	50.00	Month.	600	.....	Good.	.....
372	Melbourne	12	75.00	Month.	900	100	Good.	.....
373	Mingo	12	55.00	Month.	660	None.	Good	.....
374	Oelwein	12	50.00	Month.	580	None.	Fair	.....
375	Peru	12	50.00	Month.	600	None.	Good.	.....
376	Perry	12	100.00	Month.	1,100	125	Fair.	.....
377	Shaunon City	12	45.00	Month.	600	None.	Good.	.....
378	Valeria	12	40.00	Month.	500	None.	Poor.	.....

Telegraph operators at railroad stations report their work is continuous for 365 times. Formerly there was no extra compensation for such extra time, and is not over 25 cents per hour for all over 12 hours per day.

The monthly wages quoted represent the average earnings. The railroad commission on business at stations ranging from 3 to 10 per cent.

NOTE BY COMMISSIONER:—Expressions given by telegraph operators under the above numbers in table because of possibility of identification which is prohibitory.

*MISCELLANEOUS OCCUPATIONS.

SUPPLEMENTARY.

379	Council Bluffs	12	\$15.00	Week.	.....	None.	Fair.	.....
380	Council Bluffs	10	.80	Hour.	\$ 650	.....	Fair.	.....
381	Des Moines	11	55.00	Month.	660	None.	Good.	.....
382	Des Moines	10	1.80	Day	518	None	Fair.	.....
383	Des Moines	10	2.50	Day.	650	.....	Fair.	.....
384	Des Moines	8	2.00	Day.	580	None	.....	.....
385	Duncombe	6	55.00	Month.	500	\$ 250	Good.	.....
386	Dubuque	10	2.50	Day.	.....	125	Good.	.....
387	Keokuk	10	2.00	Day.	432	None	.....	Bad.
388	Marshalltown	12	30.00	Month.	300	None	Good.	.....
389	Ottumwa	9	6.00	Week.	317	None.	Good.	.....
390	Ottumwa	12	55.00	Month.	660	75	.....	.....
391	Ottumwa	10	.22	Hour.	650	50	.....	.....
392	Ottumwa	12	.16	Hour.	575	None.	Fair.	.....
393	Pella	10	85.00	Month.	.....	None.	.....	.....
394	Sioux City	10	2.50	Day.	.....	75	Good.	.....
395	Sioux City	10	2.50	Day.	780	None.	Good	.....

*Index to occupations: 379 Newspaper reporter; 380 Pattern maker, wood; 381 Janitor office building; 382 Shirt polisher, laundry (female); 383 Upholsterer; 384 Cigar maker; 385 School teacher (male); 386 Shoe worker.

IOWA—CONTINUED.

Amount of Insurance Carried.		The Home.			Variation in Hours and Wages Since 1900.	Marginal number.
Life.	Fire.	Owned?	Value of.	Equity in		

TELEGRAPH OPERATORS AT RAILWAY STATIONS.

\$ 500		No.			25c per hour for overtime.	846
500		No.			8 per cent increase through organization	847
		No.				848
1,700		No.				849
8,800		Yes.	\$ 900	\$ 900		850
8,000		No.			50c a day decrease.	851
1,000	\$ 500	No.				852
1,500		No.			25c per hour for overtime.	853
2,500		No.			25c per hour for overtime	854
		No.			\$5.00 per month increase through O. R. T.	855
500		No.				856
2,000		No.			\$20.00 per month increase, promoted.	857
		No.				858
		No.			25c per hour for overtime.	859
		No.			\$5.00 per month increase through O. R. T.	860
800		No.			\$5.00 per month increase through union.	861
		No.			25c per hour for overtime.	862
1,000		No.				863
1,000	500	Yes.	600	100		864
500	400	No.				865
	500	Yes.	1,500			866
800		No.			35c per day increase through O. R. T.	867
800		No.			15c per day inc., voluntary by company	868
5,500	1,500	Yes.	1,700	1,700		869
1,000		No.			25c per day increase through organization.	870
1,800		No.			\$10.00 per month increase, promoted	871
1,000		No.				872
2,500		No.				873
2,000		No.				874
2,800	800	No.			\$10.00 per month increase, promoted	875
		No.				876
		No.				877
		No.				878

days in the year, 12 hours constitute a day's work although the day runs over that at to-morrow now only on such railroads where the operators are organized, then the rate is companies pay \$20.00, \$25.00 and \$30.00 per month and the express companies allow a combined parts of this chapter relative to "legislation required" and "remarks" do not follow A private office number is therefore given them elsewhere in the chapter.

*MISCELLANEOUS OCCUPATIONS.

SUPPLEMENTARY.

\$ 2,000	\$ 750	No.				879
200		No.				880
	125	No.				881
None.		No.				882
		No.				883
2,000	1,100	Yes.	\$1,500	\$1,500	10 per cent increase by self-application	884
		No.			10 per cent increase through shoe workers' union	885
		No.			3 per cent decrease	886
1,000		No.			A small increase for good service.	887
1,000		No.			1 hour less per day; 5 per cent increase through organization	888
1,500		Yes.	800	800		889
1,000		No.			30 cents per day decrease	890
1,000		Yes.	1,000	900	14 cents per day increase through union.	891
		No.				892
		No.			50 cents per day increase by organization.	893
		No.			25 per cent increase by organization	894

*Index to occupations: 387 Poultry dresser; 388 Waiter; a Board included; 889 Overalls maker (female); 890 Policeman; 891 Switch and signal mechanic; 892 Motorman street railway; 893 Express wagon driver; 894 Horseshoer; 895 Mattress maker.

SHOP AND FACTORY CONDITIONS REPORTED BY WAGE EARNERS OF IOWA.

1. BAKERS—Cedar Rapids. One man injured in dough brake.
23. BLACKSMITHS—Ottumwa. One boy had legs broken by being caught on countershaft while trying to put a belt on pulley. One man had finger broken in a drop press while it was out of repair. Polishing belts and emery wheels for grinding copper should be furnished with blowers.
18. BLACKSMITH—Cedar Rapids. Shop is too cold in winter; too much gas and smoke causes sickness among our employes.
27. BLACKSMITH—Waterloo. Too much smoke in shop and drinking water not good.
29. BOILERMAKER—Dubuque. Shops in winter are very cold and full of smoke gas and dust.
31. BOOKBINDER—Cedar Rapids. Ventilation poor. There are twenty-eight people employed in one room, 40x100.
36. BOOKBINDER—Des Moines. Alley is in bad condition; no separate water closets for females.
43. BRICKLAYER—Muscatine. Such a thing as a fire escape on a building in Muscatine is unknown. Many accidents to hands and fingers occur in the saw mills here on account of unguarded machinery.
48. BROOM MAKER—Dubuque. Poor heat, poor lights, poor ventilation; no separate water closets for females; bad sanitation.
49. BROOM MAKER—Dubuque. No separate water closets for females; bad sanitary arrangements; poor ventilation; no heat.
50. BROOM MAKERS—Sioux City. Unclean water closets and unsatisfactory sanitary conditions; no separate closets for females.
51. BUTTON CUTTER—Muscatine. No fire escapes; floors swept but once a week; filth from shells left on floor; closets are not kept clean, and sanitary conditions are unhealthful.
52. BUTTON CUTTER—Muscatine. One man disabled for several months by getting caught with a protruding set screw. Boiler explosion also occurred. Improper ventilation in factory; water closets dirty, and never disinfected.
54. CARPENTER—Centerville. Double end turning chisel fouled and cut my wrist.
63. CARPENTER—Iowa Falls. Foundation caved in and killed one man.
64. CARPENTER—Muscatine. Three men injured by falling from scaffold.
68. CARPENTER—Waterloo. Scaffolding gave way twice, men's legs broken in both instances.
70. —CARPENTER—Sioux City. Five accidents through defective scaffolding.
71. CAR REPAIRER—Cedar Rapids. Closets dirty and water unfit to drink.
72. CAR REPAIRER—Cedar Rapids. Dangerous, unguarded twelve-inch belt in car shop; sanitary conditions unhealthful, drain for sewage into a stagnant pond. Two fingers taken off on one man and numerous bad cuts to other men on a rabbeting machine used for making grain doors; no guards on it. Numerous accidents have occurred owing to unsafe approaches to shop across switch tracks; two of the shop men have been killed on account of it.

73. CAR REPAIRER—Centerville. Water closets not fit to go in.
75. CAR REPAIRER—Council Bluffs. Blue flags for car repairer signals should be changed to red so they could be seen easier. Two men have been killed and one man had his hand cut off on this account.
76. CAR REPAIRER—Eagle Grove. One car repairer killed while working under car.
79. CAR REPAIRER—Marshalltown. During last year two men on machines lost their fingers. Sanitary conditions are bad and closets dirty.
80. CAR BUILDER—Marshalltown. Six accidents have occurred here; one man had arm broken, several had fingers cut off and others badly bruised. Water closets in unsanitary condition.
81. CAR BUILDER—Missouri Valley. Several minor accidents; no fatalities. Sanitary conditions bad; decayed matter lays under the floor; no ventilation.
82. CAR REPAIRER—Missouri Valley. Numerous fingers lost with unguarded machines. One man had foot crushed in taking down air tanks. Water closets for foremen are separate. The men have an open pit, with a rail across the top and it has not been cleaned in ten years, or disinfected. There are four covered pits in the shop extending the whole length; lots of refuse gathers in them; in warm weath the odor from them is extremely unhealthy and disagreeable. They have been cleaned but once in ten years.
84. CAR REPAIRER—Walsh. Water closets are too dirty for a dog to go in. A great many accidents have occurred; I cannot give exact number.
86. CIGAR MAKER—Burlington. Sanitary conditions in shop are unhealthy; too many workmen in room; water closets unclean.
163. COAL HOISTING ENGINEER—Hocking. There is no fire protection at the mine where I am employed and in case of fire the 200 men that are in the mine would stand great danger of suffocation.
164. STATIONARY ENGINEER—Hopeville. One man lost a foot in saw mill here and one severely injured on a traction engine.
196. MACHINIST—Marshalltown. Very poor water closet for the men; the sewer in shop is in bad shape. One man had his arm broken; one man lost three fingers and also broke his arm.
197. MACHINIST—Marshalltown. Two men lost two fingers each by getting them caught in unguarded gears on lathes and planers. No sewer or drainage to closets.
198. MACHINIST—Missouri Valley. Water closets very bad; pits in the shop very filthy.
199. MACHINIST—Missouri Valley. Sanitary conditions in shop pits bad; water closets unfit for hogs to go to.
202. MACHINIST—Oelwein. There are a number of machines in shop with gears unguarded. An apprentice lost a finger on the guide grinding machine; a machinist lost two fingers and part of his hand on reversing gear of planer; a laborer had his foot crushed on transfer table; a fire knocker had his arm cut off in clinker pit by locomotive, and a machinist lost an arm in the round house. The locomotives are raised by an electric crane with a sixty-five ton capacity, but the new engines are very heavy. The crane has all it can do to lift them and appears to be overtaxed; the three-fourths-inch cables that do the hoisting look none too strong for the weight they carry. It is of vast importance that the crane be absolutely safe as we must be underneath the engine while it is in the air for the purpose of rolling out the wheels and placing our blocks.
- 204 and 205. MACHINIST—Ottumwa. One man caught on line shaft set screw. Sanitary conditions in shop and water closet not good. Walls to building unsafe.
210. METAL WORKER—Ottumwa. Sanitary conditions in shop unhealthy. Emery wheels and belts have no protection; the dust from them is bad.
212. MILL MACHINE HAND—Burlington. One man lost his hand in a joiner that was unguarded.
214. MILL MACHINE HAND—Cedar Rapids. One man lost two fingers in a machine.

215. MILL MACHINE HAND—Clinton. Four accidents on jointer and rip-saw machines; water closets unclean.

217. MILL MACHINE HAND—Davenport. One man fell through an opening in floor and lost eight weeks and not able to work yet. Many accidents happen through carelessness. I lost three days out of twenty-two years by accident, which was my fault. The fingers I have seen cut off are too numerous to mention.

218. MILL MACHINE HAND—Keokuk. My sixteen-year-old boy had his hand crushed on a machine on which twelve other boys had been injured and one was killed; a boy under sixteen is running it at present.

220. MILL MACHINE HAND—Lyons. Defective sewage and unclean water closets.

222. MILL MACHINE HAND—Muscatine. Many accidents occur on saws and sticker machines. The water closet is close to door of shop and unclean, the stench from which is awful.

223 and 224. MINERS—Altoona. Sanitary conditions not good; poor air and no escape shaft to mine.

225. MINER—Beacon. Unsanitary conditions; ventilation laws not enforced.

227 and 229. MINERS—Bussey. Imperfect ventilation.

230 and 231. MINERS—Centerville. Several serious accidents; air in mines not good.

232, 233, 235. MINERS—Cincinnati, Coalfield and Dean. Bad air at all places.

236. MINER—Des Moines. Five miners killed by blast in mine; one miner killed by falling slate; several seriously injured.

237, 238. MINERS—Des Moines. Insufficient air to clean out black damp.

239. MINER—Diamond. Sanitary conditions unsatisfactory; water very bad; accidents frequent.

241, 242. GYPSUM ROCK MINERS—Fort Dodge. Unsanitary conditions prevail; not sufficient air to carry off the powder smoke; no escape shafts; four men injured by falling roof.

246. MINER—Lehigh. One man shot in mine; one fell down the shaft; both accidental.

247. MINER—Lost Creek. Unsanitary conditions and imperfect ventilation.

249. MINER—Morgan Valley. Iowa mines must soon be ventilated better than they are at present or the life of miners will be much shorter. The average industrious miner is broken in health and vigor in about fifteen years. This means a great loss to all in the wage account. In the Eagle mine, four persons were injured, two from dust or gas explosions, one from car coupling, one from falling slate.

250, 251. MINERS—Mystic. Lack of air in sufficient volume. One man killed, four injured.

252. MINER—Oskaloosa. Ten accidents from falling slate. Ventilation contaminated with noxious gases. We need steam heated wash houses at the mines furnished by the companies for the convenience of the miners and in the interest of their health.

253. MINER—Ottumwa. One man killed, five injured; no one to blame.

256. MINER—Walsh. The air we are furnished is off a burning dirt dump. When the wind is in the south it is unsanitary. The amount of air required by law is not supplied.

261. MOLDER—Cedar Rapids. One man lost an eye and a number burned from molten metal. Safety laws violated by employers; no blowers on emery wheels. Factory inspection should be frequent and unexpected by owners or agents.

264. MOLDER—Marshalltown. Unsanitary conditions prevail especially in winter; gas blown from open stove injurious to lungs.

282. PLUMBER—Ottumwa. Unsanitary conditions is the rule in this vicinity.

*284. PRESSMAN—Dubuque. Broke two ribs falling over paper cutter while putting on belt.

291. PRINTER—Clinton. No separate water closets for females; poor ventilation in shop; too dusty.

294. PRINTER—Des Moines. One man had hand crushed between belt and pulley; another had arm mangled and was thrown over sixteen feet. Printing offices are too often in the same room with a gas engine. Some of these are dangerous; all of them pollute the ventilation. Little or no attention is paid to sanitary conditions. Many of the best shops have dirt and filth sticking to the floors one-fourth to one inch thick. This may appear exaggerated, but it is not. This condition has prevailed in Des Moines for the last two years to my own knowledge. Shops are rarely and sometimes never scrubbed. The tobacco spit and dust that has set fast from being wet down when the floors are swept makes the odor terrible. It is dangerous to the health of those who have to occupy the rooms all day.

295. PRINTER—Des Moines. Sanitary conditions not good; ventilation poor. Trash is allowed to accumulate and water closets are unclean.

297. PRINTER—Dubuque. Sanitary conditions not healthful; poor ventilation and water closet in work room.

302. PRINTER—Sioux City. One press feeder had arm caught in gear wheels; was laid up over two months.

303. PRINTER—Sioux City. No fire escapes on building; drinking water very poor.

309 and 310. STEREOTYPY—Des Moines. Improper ventilation. Rooms where stereotyping is carried on should be kept out of basements. We cannot get sufficient ventilation on account of the extreme heat from hot metal.

313. STONE CUTTER—Cedar Rapids. One man had finger taken off of his left hand in windlass of derrick.

336. TAILOR—Keokuk. Shop is unclean; poor ventilation and sanitary conditions not good.

386. UPHOLSTERER—Des Moines. One boy had hand injured in a picking machine; water closet is in the cellar with no ventilation.

387. POULTRY DRESSER—Keokuk. Sanitary conditions unhealthful and water closets unclean.

WAGE EARNERS OF IOWA.

REPLIES FROM INDIVIDUAL WAGE EARNERS TO QUESTION: WHAT SPECIFIC LEGISLATION WOULD BENE- FIT WAGE EARNERS IN YOUR OCCUPATION?

1. **BAKER**—Cedar Rapids. A twelve-hour day for bakers and pay by the hour at a minimum rate of 20 cents an hour; foremen to get 25 cents an hour.
2. **BAKER**—Des Moines. Reduction of hours for bakers and abolition of night work.
3. **BAKER**—Sioux City. Prohibition of underground bake shops.
5. **BARBER**—Burlington. Adopt a license law for barbers, and exclude child and female labor from men's work.
8. **BARBER**—Council Bluffs. Compel the barbers to pass a state examination, and abolish the so-called barber schools.
9. **BARBER**—Davenport. Before a barber is allowed to practice he should pass an examination.
10. **BARBER**—Des Moines. A state law, licensing and regulating the sanitary conditions of the barber profession is needed. Better laws for the protection of labor in hazardous trades are required in the state.
11. **BARBER**—Dubuque. State license law for barbers.
13. **BARBER**—Muscatine. Barbers want the license law that was presented to the Twenty-ninth General Assembly enacted.
- 15, 16. **BARBERS**—Oskaloosa. License law for barbers like bill presented to the Twenty-ninth General Assembly.
17. **BARBER**—Sioux City. A law licensing and regulating the practice of barbering. Compulsory education enforced.
18. **BLACKSMITH**—Cedar Rapids. An eight-hour day.
19. **BLACKSMITH**—Corydon. Give us a shorter work day. Instead of living to work, we ought to work to live.
21. **BLACKSMITH**—Fort Madison. Stop convict labor competing with us, and enact laws stopping blacklisting.
22. **BLACKSMITH**—Oelwein. Enact laws that will bring about the eight-hour work day and stop foreign immigration.
23. **BLACKSMITH**—Ottumwa. Enact and enforce laws prohibiting children under fifteen years working in shops. Emery wheels and belts you ordered to have hooded have not been attended to yet.*
24. **BLACKSMITH**—Ottumwa. Similar suggestions and complaint of shop conditions as No. 23.
26. **BLACKSMITH**—What Cheer. An eight-hour state law first and publish facts you collect in the bureau in daily papers instead of book.
28. **BOILER MAKER**—Cedar Rapids. Enact and enforce an eight-hour form.†
31. **BOOKBINDER**—Cedar Rapids. Our employers know the exact amount their employes are making. Legislation is required that will compel the employers to show us how much they are making annually on their investments. The employes would then know whether they are getting

*Later report acknowledged the complaints was remedied.—Commissioner.

†This is done as far as practicable.—Commissioner.

their fair share or not. The labor bureau reports should be distributed through the different labor unions. Too few of us ever see one.

32. BOOKBINDER—Cedar Rapids. Enact legislation to define a man's work so as to keep boys from doing same for small wages.

33. BOOKBINDERS—Davenport. Boards of county supervisors and school districts should be shown the importance of the union label on books and stationery used and a plan devised to enact it into law.

34. BOOKBINDER—Des Moines. Have allied printing trades label on all state printing and binding.

38. BRICKLAYER—Boone. A national and state eight-hour day law.

39, 40. BRICKLAYERS—Council Bluffs and Des Moines. A legal eight-hour day that can be enforced.

42. BRICKLAYER—Lyons. I recommend that the same laws should govern mechanics as now protect lawyers, doctors and teachers; all should be required to pass an examination and be furnished a certificate.

43. BRICKLAYER—Muscatine. The bureau of labor should have power to enforce the compulsory education law. This would be the greatest benefit to labor. The foreign element here care more for the money earned by the children than for any educational benefits they can derive from school. A great many children in this city have never been inside a school house and many men of the same nationality are unable to read or write. The law has been too long delayed for them but it should be enforced for the sake of their children.

44. BRICKMAKER—Des Moines. A state law providing for the examination and licensing of engineers and firemen would be of benefit to us and protection to property as well.

46. BROOM MAKER—Des Moines. Enact a law to prohibit prison made brooms from other states to be sold in Iowa and not allow such goods to be made in our own state prisons and placed upon the market.

47. BROOM MAKER—Des Moines. Do away with convict labor on broom making as it is doing great injustice to honest labor. The state should place the convicts on the public highways improving the roads and not manufacture so many things to injure capital and labor.

49. BROOM MAKER—Dubuque. Keep convict-made goods out of the state and prohibit the employment of children.

50. BROOM MAKER—Sioux City. Pass a law for all prison made goods in Iowa to be used only by state institutions and keep prison-made goods in other states out of Iowa.

53, 55, 56, 57. CARPENTERS—Burlington, Colfax and Council Bluffs. Enact a law making eight hours a day's work.

58. CARPENTER—Corydon. By all means get a shorter work day and reduce the supply of workers. If our legislators cry that an eight-hour day is unconstitutional, then let them submit an amendment to the people so they can put it in the constitution.

60. CARPENTER—Creston. Prohibit the employment of children under sixteen and compel all children between six and sixteen years to attend school. Make public all information gathered by bureau and distribute through county officers.

63. CARPENTER—Iowa Falls. If something could be done by way of legislation to shorten the length of the work day it would be a great benefit to laboring men; ten hours hard work day after day and week after week is a terrible drag on the laboring class.

67. CARPENTER—Oelwein. City building inspectors are needed, and factory inspectors for the mills and shops as they employ children under fourteen.

68. CARPENTER—Waterloo. Enact a state law compelling all towns over 5,000 people to provide for a building inspector, and state requirements complied with as to the condition of public office and commercial buildings and the method employed in building same.

70. CARPENTER—Sioux City. Building inspectors should be appointed in each town. Architects should be examined and licensed if found com-

petent. Contractors should be bonded so as to insure full payment of all debts incurred in building. An arbitration board should be appointed by the state to settle differences between employers and employes.

71. CAR REPAIRER—Cedar Rapids. We want a better child labor law, so as to keep so many children out of the factories.

72. CARMAN—Cedar Rapids. Prevent child labor and have corporations establish a regular pay day. We now have it anywhere from the seventeenth to the twenty-fifth of the month. This is too uncertain.

75. CAR INSPECTOR—Council Bluffs. Prohibit Sunday labor, and establish an eight-hour day.

76. CAR REPAIRERS—Eagle Grove. An eight-hour day and legislation against the age limit on railroads.

81. CAR REPAIRERS—Missouri Valley. I believe that legislation tending to compulsory arbitration is to the advantage of the wage earner and the public. If this be socialism let us make the most of it. It looks to me it is but the answer of rational government to the imperative demands of the situation. The public has too much at stake in the great enterprises which are called "private" only because private individuals receive the dividend to let affairs take their own course in every emergency. The demand is imperative for some method of protecting the rights of the public. The only real choice is between compulsory arbitration and some other method of control. The present regime is impossible to continue. The country can as easily afford to make one or two mistakes experimenting as to continue the same old costly mistake of allowing the rights and interests of the public to go unregarded while labor and capital are fighting out their quarrels in strikes. If we must learn by making mistakes let us at least make a new one from which we can learn something.

82. CAR REPAIRERS—Missouri Valley. Secure for us by legislation an eight-hour day; giving us more time for mental and social improvement. From personal contact with our fellow workmen I know that the time thus given would be spent so as to increase the honesty, integrity and efficiency of the workers upon whom depend the welfare of the community, state and nation, the honest industrious laborer is justly entitled to more than the bare necessities of life.

86. CIGAR MAKER—Burlington. Government ownership of the means of production and distribution.

87. CIGAR MAKER—Cedar Rapids. Prevention of child labor.

88. CIGAR MAKER—Council Bluffs. Legislation that will control the tobacco trust.

90. CIGAR MAKER—Davenport. Abolition of child labor and more stringent school regulations. Enact laws making eight hours or less a day's work and a good boiler inspection law, with regulations to prevent men who have care of boilers to leave them to do other work. Firemen should pass an examination for efficiency, and even the ash wheelers should be competent in cases of emergency to prevent danger.

92. CIGAR MAKER—Marshalltown. A state factory inspector should be appointed to look after the sanitary conditions and child labor in factories and stores.

95. CIGAR MAKER—Oskaloosa. The abolishment of child labor under sixteen years and protection afforded females, so they may be paid as much as men when performing similar service.

96. CIGAR MAKER—Sioux City. Government ownership of public utilities.

97. CIGAR MAKERS—Sioux City. Enact a liberal license law and stringent anti-trust laws.

100. POST OFFICE CLERK—Keokuk. National legislation wanted; the eight-hour day and classification of all clerks in the post office service. State legislature should be induced to pass a child labor law making the age limit sixteen years, and also pass a state law requiring only eight hours labor per day on state work.

105. RETAIL CLERK—Boone. A law wanted to provide for a ten-hour day, and a rigidly enforced Sunday closing law and compelling employers of women clerks to place seats behind counters for their comfort.

106. RETAIL CLERK—Clinton. For a ten-hour day for retail clerks and Christian observance of the Sabbath.

107. RETAIL CLERK—Davenport. A law that would prevent child labor.

109. RETAIL CLERK—Keokuk. Shorter day's work to eight hours, close business Sundays.

110. RETAIL CLERK—Lyons. Abolishment of prison and child labor. Strict observance of Sabbath by merchants.

119. COOPER—Des Moines. Prohibit convict competition with the coo-perage business, and establish eight hours for a day's work.

124. COOPER—Ottumwa. An eight-hour day law and one prohibiting the manufacture of cooperage in the state prisons.

125. COOPER—Sioux City. Stop convict contract labor on butter tubs.

128. RAILROAD CONDUCTOR—Boone. State legislation is required to stop double heading engines. All trains should have a flagman in addition to the two brakemen on passenger trains of five cars or more. Freight trains of fifteen cars or more should also have a flagman as extra train hand. All passenger conductors should be empowered with state police authority while in duty and wear a badge (like in Massachusetts).

131. RAILROAD CONDUCTORS—Des Moines. The state legislature should provide for more help in the labor commissioner's office, so that the commissioner could get out to inspect the conditions of labor personally.

132. RAILROAD CONDUCTORS—Dubuque. State legislation should be enacted to put one brakeman on for every ten cars in a freight train. Dispense with double-headers. Stop railroad employes from working fifteen to thirty hours in continuous service. On long trains of seventy-five cars and over it is unsafe with only two brakemen, especially on curves where they are unable to pass signals to each other.

133. RAILROAD CONDUCTOR—Mason City. Do away with double-headers by legislature and make fifty cars the maximum on freight trains.

134. CONDUCTOR—Mason City. Prohibit the running of double-headers by law and limit the number of cars to fifty that may be hauled in one train at one time.

135. RAILROAD CONDUCTOR—Perry. Cut out double-headers.

137. ELECTRICIANS—Des Moines. Abolish government by injunction.

138. ELECTRICIANS—Fort Dodge. The great need of the present day is a holler inspection law and a license law for stationary engineers, not too rigid a law but yet covering the field.

139. LOCOMOTIVE ENGINEER—Boone. Shorter hours and shorter trains. Better facilities for protecting health of railroad men and government ownership of public utilities.

141. LOCOMOTIVE ENGINEER—Burlington. Laws compelling railroad companies to allow sufficient rest after a certain number of hours on duty and also preventing the running of trains or engines without conductors or backing engines or trains after dark without headlights, on rear end of tank or train.

144. LOCOMOTIVE ENGINEER—Des Moines. A law is required limiting the number of cars in one train and specifying the minimum number of trainmen. Double-headers are extremely dangerous and should be prohibited, three lives have been lost within the past year on the road where I am employed on account of double-headers. A law based on scientific principles specifying size and weight of locomotives to be used on rails of given weight with a minimum degree of curvature governed by the wheel base of engine would very greatly lessen the liability to accident and be a material safeguard for the traveling public.

145. LOCOMOTIVE ENGINEER—Des Moines. Double-heading engines should be prohibited by law. They work a hardship to all men engaged, the second engine on a double-header is a veritable death-trap, and the

extra responsibility on the head engineer is far in excess of the compensation received. Corporations need to be impressed with the fact that there is some humanity in workmen.

147. LOCOMOTIVE ENGINEER—Fort Madison. Shorter hours and a less number of cars in a train.

151. LOCOMOTIVE ENGINEER—Mason City. Abolishment of double-headers and blacklisting and establish a minimum rate to pay for railway employes. This company (C., St. P. & M.) have adopted an automatic coupler on front end of engine which is very dangerous in the case of striking stock which knocks them down under the engine, making it dangerous for the public and employes. They should be changed to drop couplers operated by a lever from the cab.

152. LOCOMOTIVE ENGINEER—Missouri Valley. Shorter hours, and a less number of cars hauled in freight trains and abolish double-headers.

153. LOCOMOTIVE ENGINEER—Missouri Valley. A maximum work day of fourteen hours should be a state law for railroad employes. Abolish the backing up of light engines, or trains, make it mandatory for conductors to accompany light engines.

155. LOCOMOTIVE ENGINEER—Sioux City. Compel railroad companies to limit time for employes to be on continuous duty, making the maximum sixteen hours; some of the freight runs on this division require twelve hours to go over them. Factory inspectors should be appointed to enforce sanitary conditions and prevent the employment of boys under fourteen and girls under sixteen.

156. LOCOMOTIVE ENGINEER—Sioux City. Abolish double-headers and regulate hours for railroad employes on duty to a reasonable limit.

157. COAL HOISTING ENGINEER—Albia. The organization of engineers will help us more than legislation.

158, 159, 160, 161, 162, 163, 164, 165, 166 167. STATIONARY ENGINEERS—Cedar Rapids, Des Moines, Dubuque, Hocking, Hopeville, Marshalltown, and Waterloo. All of these engineers are a unit in pleading for a good state boiler inspection law, and a law making it obligatory for stationary engineers to pass a state examination and secure a license before being allowed to have charge of steam boilers and machinery.

168. LOCOMOTIVE FIREMAN—Boone. Make it illegal for a fireman to be on continuous duty over fourteen hours.

171. LOCOMOTIVE FIREMAN—Calmar. Abolish double-heading of engines and limit tonnage of trains hauled so that a fireman may know what is going on some of the time.

172. LOCOMOTIVE FIREMAN—Walsh. A state board of three to arbitrate all difficulties in state between capital and labor. I carry \$750.00 Burlington relief commonly called "voluntary relief," but erroneously named. This is a matter that needs some attention by our law makers, I can furnish plenty of good reasons by employes of this railroad.

173. LOCOMOTIVE FIREMAN—Waterloo. Have it made unlawful for railroad corporations to work employes over twelve continuous hours without an intermission of eight hours for rest, this is to apply to those in train service, something should be done to stop the practice of working them sixteen and twenty-four hours without rest.

176. HARNESS MAKER—Davenport. Eight hours a day for all and direct legislation.

178. HARNESS MAKER—Oskaloosa. Stop child labor in harness shops and compel the boys to go to school.

182. HOD CARRIER—Ottumwa. We hod carriers want an eight-hour day fixed by the state for state work, it would make it easier then to get it from the contractors.

184. LABORER—Council Bluffs. Railroad constructors and city contractors should be made to pay their laborers in full and not discount or shave their small wages.

186. MACHINIST—Cedar Falls. Establish a legal eight-hour day and provide means to settle labor disputes by arbitration.

188. **MACHINIST—Centerville.** Make eight hours a legal day's work, and make it compulsory for all machinists to first serve a legal apprenticeship of four years.

191. **MACHINIST—Davenport.** Stringent child labor laws; abolish convict contract labor and make eight hours a legal day's work.

192. **MACHINIST—Des Moines.** *First.* The legislature should make eight hours a maximum day's work for all employes of the state and require it as a provision in all contracts for supplies purchased and public work done. *Second.* A state board of arbitration should be provided for on the following non-partisan basis: The board should consist of five members, one to be selected by the industrial labor organizations affiliated with the American Federation of Labor in the state, one to be selected by the employers of labor of the state, and who is in active business in some industrial line; one to be selected by the railroad organizations of the state, one to be selected by the railroads of the state, who represents the maintenance or mechanical departments and not one engaged in the legal department. These four to be appointed by the governor on receipt of the several selections by the interests here outlined, and they to select a fifth member to represent the general public, this fifth member should not be a member of any labor or professional organization, neither should he be an employer, or a man publicly known as a politician. This board when organized should have the power to offer their services as conciliators to employers and employes who may have disputes pending and do all in their power to avoid strikes by bringing the parties in contest together. In the event of strikes they should have the power to immediately go to the scene of the controversy, make detailed investigations and endeavor to settle the dispute, keeping a record of their services and publish their reports in the newspapers of the state. *Third.* The children of the state should be immediately protected before serious evils become permanent and the difficulties to be met are increased; first by amending the compulsory education law striking out the twelve weeks provision for a child to attend school so that the attendance would cover the whole term. It should be made a penal offense to employ children in mines, factories or stores who are under fifteen years of age. Man's first duty to man is to protect the child whether it be his child or his neighbor's, and it would be well for the General Assembly of Iowa to set the example.

196. **MACHINIST—Marshalltown.** The shorter work day is what we need first, if there is doubt as to such a law being unconstitutional, let the General Assembly submit an amendment to the people to make it constitutional for eight hours to be the length of a maximum day's work.

198. **MACHINIST—Missouri Valley.** Have contract convict labor dispensed with on manufactured products and use their labor for improvements on public highways.

202. **MACHINIST—Oelwein.** The eight-hour day. The payment of employes every two weeks. A more liberal appropriation to the Bureau of Labor to permit the Commissioner to come in closer contact with the wage earners, that will insure better factory inspection and violation of child labor laws.

207. **MACHINIST—Waterloo.** An eight-hour day on all public works and employment of union men only.

211. **METAL WORKER—Sioux City.** Give us the eight-hour law, and abolish child labor and prison labor, that is, competitive.

212. **MILL MACHINE HAND—Burlington.** A state board of arbitration compelling employers and employes to settle all strikes and lockouts by arbitration. Stop child labor in factories. Have a city factory inspector whose duty it should be to enforce the laws.

215, 216. **MILL MACHINE HANDS—Clinton.** Shorter hours, abolition of child and convict contract labor, better sanitary conditions and strict factory inspection.

217 218, 219, 220. **MILL MACHINE HANDS**—Davenport, Keokuk and Lyons. The abolition of child labor and the establishment of an eight-hour day.

223, 224. **MINERS**—Altoona. Enact the Kendall bill requiring shot firers, and enforce existing laws, by strict inspection personally at regular intervals

225. **MINER**—Beacon. Abolish screens, or weigh before screening.

226. **MINER**—Brazil. Gross weight system made compulsory, also shot firing and examining.

227, 229. **MINERS**—Bussey. Raise the ages of children working in the mines from twelve to fourteen years by legal enactment and furnish more air in mines.

230, 231. **MINERS**—Centerville. Weekly pay days; prohibit boys from working in mines under fourteen years of age, and have coal weighed before screening.

233. **MINER**—Coalfield. Have mine inspectors elected by direct vote and compel miners to produce certificates of two years' experience in a mine.

234. **MINER**—Colfax. We have enough legislation but we are compelled to sign away our rights, what the miners want is to abolish truck or company stores.

236, 237. **MINERS**—Des Moines. Enact a law for gross weight; compel operators to bear expense of shot firers, and compel railroads not to discriminate on freight rates.

240. **MINER**—Eveland. Compel men holding weigh boss positions to pass an examination and strictly enforce all safety and sanitary laws.

241, 242. **GYPSUM ROCK MINERS**—Fort Dodge. Have the gypsum mines placed under the state mining laws. We have no way of escape only by the main shaft, in case of fire or other accidents on top we would have no way to get out of the mine.

248. **MINER**—Lost Creek. Wanted a law to keep boys out of mines until they pass fourteen years of age and a law to abolish the company store, which is one of the worst evils the miners of Iowa have to contend with.

249. **MINERS**—Morgan Valley. Shot firers to be engaged by operators. Proper ventilation to be furnished promptly and in sufficient quantities

252. **MINER**—Oskaloosa. Compulsory education for full school term. Better sanitary conditions and a more rigid enforcement of all mining laws.

256. **MINER**—Walsh. Wanted a weekly pay day law also a law compelling operators to shoot the slate down in air courses the same as in main entries and sufficient appropriation by the state to allow the Commissioner of labor to inspect the different mining camps and factories.

257, 258. **MINERS**—Willard. Enact a law providing shot firers to be engaged at the expense of the mine owners. Miners to be paid on a mine run basis, and have mine inspectors make regular trips around mines to look out for safety; the operators would then keep the ventilation of his mine in better shape and his escape shafts in good condition so men can easily get out in case of accident or fire.

261. **MOLDER**—Cedar Rapids. More stringent laws in regard to child labor, and provisions made by state for a factory inspector; employers violate safety provisions.

264. **MOLDER**—Marshalltown. A legal eight-hour day would benefit the working class most, and provide means to enforce present laws.

266. **PAINTER**—Cedar Rapids. City building inspector, and hold employers responsible for accident to employes on account of poor ladders and staging.

270. **PAINTER**—Keokuk. Have a state arbitration board appointed by the governor.

277. **PLASTERERS**—Ottumwa. State control of public utilities, and print enough labor reports to furnish every family with a copy.

282. **PLUMBER**—Ottumwa. Legislation required compelling plumbers to pass rigid examination before allowing them to work on sanitary connections. This would not only be a benefit to the workmen but a blessing to a majority of people who have to live and work around the disease breeding conditions prevailing.

284. **PRESSMAN**—Dubuque. A law requiring the allied printing trades union label to be placed on all printed matter the state controls. Enact and enforce laws for child education and abolish factory labor for children.

287, 288. **PRINTERS**—Burlington. Have rigid laws enacted to exclude child labor from factories and shops. There is considerable of it in Burlington.

289. **PRINTER**—Cedar Rapids—Re-establish the state printing office; abolish the board of control and abolish the printery at the Anamosa penitentiary. Provide means to enforce existing factory legislation.

291. **PRINTER**—Clinton. A law excluding children under sixteen years from factories; a law compelling contractors in state prisons to label their products as "Prison made;" a law governing boiler inspection and licensing engineers.

294. **PRINTER**—Des Moines. Government ownership of all means of production and distribution and abolition of child labor.

296. **PRINTER**—Des Moines. No specific legislation desired for our occupation, it is impossible to patch up the old system by legislation and benefit the laboring class. The only effective remedy to solve the labor problem is to establish a co-operative commonwealth and eliminate all forms of exploitation.

297. **PRINTER**—Dubuque. Free and uniform text-books in schools and a state printing establishment. Sufficient appropriation should be made to the Bureau of Labor to allow the Commissioner to carry out existing laws.

299. **PRINTER**—Keokuk. Rigid factory inspection, compulsory eight-hour law. Single tax on land values and provisions made to enforce existing safety and sanitary laws.

301. **PRINTER**—Muscatine. Establish a state printing office on similar lines to the United States printing office. Abolish the contract system in all its phases. Increase the appropriation to enable the Bureau of Labor to enforce all the provisions of the law under which it operates. Direct legislation through the initiative and referendum would be a greater benefit to all classes than statutory enactments by the legislators, by this means only can the people ever hope to acquire the power, or rather apply the power for the abolition of the present unjust wage system and the establishment of a co-operative commonwealth founded on the system of collective ownership of all the means of production and distribution. This would benefit wage earners in our occupation and all other classes.

303. **PRINTER**—Sioux City. A law requiring the Allied Printing Trades label on all state printing.

310. **STEREOTYPER**—Des Moines. A state board of arbitration to settle disputes as to wages, hours and other general questions between employers and employees.

313. **STONECUTTER**—Cedar Rapids. The present state legislation is sufficient for my craft. The trouble is there is not sufficient honor or a true sense of justice among men.

317. **BRAKEMAN**—Carroll. It would benefit our craft if a law was enacted stopping double-heading.

318. **BRAKEMAN**—Cedar Rapids. Compel railroads to keep couplers and air brake equipment in good repair. Abolish double-headers and have one brakeman for every ten cars in train.

320. **BRAKEMAN**—Des Moines. An eight-hour day. Stop work on Sundays and double-header trains should be discontinued.

323. SWITCHMAN—Estherville. An eight-hour day; a standard grab iron and a regulation foot board on switch engines. Better enforcement of present laws governing railroads relative to the equipment of cars and better sanitary arrangements at depots.

326. BRAKEMAN—Marion. Direct legislation and municipal ownership of public utilities.

327. BRAKEMAN—Moulton. Wanted a law enforced requiring all freight trains in Iowa of over thirty cars to have three brakemen.

330, 331. BRAKEMEN—Perry. Shorter hours for railroad men; better enforcement of equipment law and withdrawal of injunction abuses.

337. TAILOR—Ottumwa. Enact and have enforced laws that would prohibit the making of garments at wage earners' homes. Sickness and disease are sometimes conveyed by garments made in the homes of tailors and spread among the people.

343. EXPRESS DRIVER—Des Moines. Legislation that will shorten the work day and abolish Sunday work. Amend the compulsory education law by striking out the period of "twelve weeks" and make it read "the whole school term."

380. PATTERMAN—Council Bluffs. By all means have a law passed for the regular inspection of steam boilers and compel men who fire boilers and run steam engines to first pass examination and procure a license. Where I am employed at the _____ Manufacturing Company, Council Bluffs, the fire had to be drawn several times during the last month and if some one had not gone in the boiler room the man who was running the boiler would have turned in cold water when what water there was in the boiler was clear out of sight. This boiler has not been inspected for fifteen years. Parties have told the company to pay no attention to you, but when I reported the outhouses to you the company fixed them. Hope you will keep up the good work for protection.

382. LAUNDRY WORKER (female)—Des Moines. Shorter hours and same pay for women doing same work as men.

383. UPHOLSTERER—Des Moines. If an eight-hour law could be legislated it would be the greatest benefit.

384. CIGAR MAKER—Des Moines. Restrict trusts and Chinese cigar manufactures. Enforce present factory laws by giving Labor Commissioner more authority and more help.

385. SCHOOL TEACHER—Duncombe. Require higher educational qualifications in order to get teacher's certificates.

386. SHOE MAKER—Dubuque. Pass a law prohibiting the employment of children under sixteen years of age. The compulsory education law as it stands is of little benefit. The children should be compelled to attend school six months instead of twelve weeks in a term. When a child goes to school twelve weeks and then is allowed to work in a factory it injures the child, demoralizes the school and reduces the earnings of the working class twenty per cent.

391. SIGNAL MECHANIC—Ottumwa. A shorter work day is what we need most and first.

392. MOTORMAN (street car)—Ottumwa. A shorter work day for street car employes by enactment not to exceed ten hours.

395. MATTRESS MAKER—Sioux City. All goods purchased by the state should bear the union label.

WAGE EARNERS OF IOWA.

REMARKS FROM WAGE EARNERS ON GENERAL SUBJECTS AND SUGGESTIONS AS TO HOW THE BUREAU OF LABOR CAN BEST PROMOTE THE INTERESTS OF THE WAGE EARNERS AND THE PEOPLE OF THE STATE.

46. BROOM MAKER—Des Moines. Nothing has so enlightened the laboring class of people and made them progressive as trade unionism. The quicker our great possibilities unfold we will breathe the free air of a God given right, that all men are entitled to equal opportunities.

51, 52. BUTTON CUTTERS—Muscatine. As society is organized at present the Bureau of Labor Statistics is a good thing, but when collectivism is established which must be soon, the Bureau will not be needed to enforce labor laws.

63. CARPENTER—Iowa Falls. Answering your questions as to cost of living must say, "everything the laboring class buys is fearfully dear, especially food, it makes little difference what our wages are it takes it all to live on."

67. CARPENTER—Oelwein. Mr. Commissioner: Having heard but little from my last communication, will try again, and wish it to be distinctly understood that I am not an agitator and have still less desire to be thought a trouble maker. If I can do anything that will benefit my fellow workmen, if I can rouse him to an honest endeavor to do that which will be a benefit to himself and those dependent upon his daily earnings; then just in proportion to the good accomplished will I be satisfied and honestly believe the whole community will be benefited. Having given the matter careful thought, it seems to me that a few figures will perhaps present more forcibly the exact situation than any other argument I might submit. First of all let it be understood that I am talking to and for my own craftsmen, viz: carpenters. Ten hours a day at \$2.25 is the standard here in Oelwein. There has been during the past year and in all probability will be the coming season, a good demand, plenty to do. Now granting that we work twenty-four days in each of the months of April, May, June, July, August, September, October and November, and that is putting it strong enough to allow for the few pieces of days you will work during the winter, then at the end of the season we will have worked 192 days at \$2.25 and our earnings will be \$432. Deduct rent twelve months at \$10.00, which would amount to \$120, Fuel and light \$40.00, and we have a balance of \$272.00 to feed and clothe yourself and family, not to mention all the incidentals that will "bob" up from time to time. Suppose there are five of us in the family and it would be the same if there were eight—that \$272.00 would have to pay the freight, but say five. There are 165 days in the year, so divide \$272.00 by 165 and you will have 75 cents per day to feed, clothe and doctor your family of five, that is 15 cents each. Now can you do it? Well, if you can those who are boarding twenty or twenty-five people at \$3.50 and \$4.00 per week, must have a bonanza. They don't have to clothe, doctor or school their boarders. Remember, you are a mechanic, skilled workman, it has cost you no small amount of money to equip yourself as a tradesman. You have in your chest fifty or seventy-five dollars' worth of tools and as many more as you can afford before you can ask your boss: What shall I do? You have something to sell—your labor, time and

knowledge. You are a producer, you take the material as it comes from the yard or mill, and build it into a house, a church, a barn, factory or store building. You have sold your time, skill and labor, not at a profit, but for a bare living. At your wages and the present cost of living, there can be no profit left for you or your family. Very often you see a house or lot with a sign upon it: "For Sale:—Apply to Mr. Blank, agent," and Mr. Blank charges the owner a handsome sum for making a sale. He makes a profit. He charges for his time and knowledge. He produces nothing. Your merchant is not a producer he devotes his time knowledge and capital or credit (as the case may be), to handling the products of labor, and as he charges you a living profit, yes, and enough more if he is wise, so that by and by as he grows too old for active business he may be able to retire. When do you expect to be a retired carpenter? I'll tell you: if you work for just what it costs you to live, you will be retired when you are too old to keep up with the balance, when you can't do a full day's work. So now I appeal to my fellow workmen, be up and doing, put yourself on a par with your craft the country over. Chicago carpenters are paid \$3.60 for eight hours work, and their employers recognizing the fact that the cost of living has advanced, are willing to make a still further advance in wages. I call upon you to organize. You will find that there are no concessions made to unorganized labor. In unity there is strength. I will endeavor to show that in many ways a thorough organization of the building trades would be beneficial to the city as well as to the workmen individually. The shopmen, retail clerks, laundry workers, tanners and butchers are organized. The doctors have organized and the retail merchants have formed themselves into a strong association. The purpose of all this organization is mutual protection. Every member is or should be a stone in the grand arch whose keystone is unity.—Ripsaw.

73. CAR REPAIRERS—Centerville. A good solid union and a minimum scale is what we need. We laborers are seeing a hard time, we have no regulations to our wages. I am doing the same work for 12½ cents per hour as other men get 16 and 17 cents for, just because the foreman neglects to look after it and is afraid of his job.

75. CAR INSPECTOR—Council Bluffs. Whenever state or city franchises are granted to corporations or individuals, the legislature or city council should make provision for an eight-hour day and double time for over eight hours and for Sundays. I am also in favor of the United States congress building a double track railroad north to south and east to west and going in competition with the privately owned railroads. Congressional documents show how nicely the railroads were run by the United States government during the Civil War between 1861 and 1864 and what pay the men got.

76. CAR REPAIRER—Eagle Grove. You can see with my annual wages of \$450 and expense to maintain my family of six. I do not make a living at the present rate of wages. Food for year \$300, fuel \$40, clothing \$66, sickness \$20, rent \$72. Sundry expenses \$12. Total \$510 for annual expense of family.

NOTE BY COMMISSIONER.—Meals cost a fraction over 4¼ cents each; clothes, \$11.00 per year each person; rent, \$6.00 per month. The charge of extravagance can scarcely be made in this case.

78. CAR REPAIRER—Fort Dodge. The Bureau of Labor can promote the interests of wage earners by looking after the laboring class and report whether the wages they receive are sufficient to maintain them.

81. CAR REPAIRER—Missouri Valley. Give us the absolute facts as they exist.

82. CAR REPAIRER—Missouri Valley. The Bureau of Labor can best promote the interests of the people; *first*, by securing the absolute privilege of an employe to trade with whom he pleases regardless of the interest an employer may have in some particular business; *second*, remove the possibility, implied in your personal letter on this schedule, viz: the

danger of discharge for furnishing information which should be public and freely given. Please note my items of income and expense since 1895. This may be of no benefit to you but hope it will not be a detriment. This shows that during the hard times of 1896 and 1897 the man employed at 17½ cents an hour could buy more than during 1902 at 20 cents an hour.

YEARS.	1896.	1897.	1898.	1899.	1900.	1901.
Annual income	\$ 504.22	\$ 490.78	\$ 422.84	\$ 504.59	\$ 545.23	\$ 624.09
Annual expense	464.52	440.55	412.94	468.61	510.53	588.69
Annual balance	\$ 39.70	\$ 40.22	\$ 9.90	\$ 35.98	\$ 51.70	\$ 35.40

I have six in family; in 1894 I worked forty hours per week
part of the year at 17½ cents an hour, earning.....\$563.12
Expenses for year 486.70

Balance to credit, 1894\$ 76.42
In 1902 I earned..... 623.10

Expenses for year.....\$617.32
Balance to credit, 1902 5.78

84. CAR REPAIRER—Walsh. Wages are from 11½ cents to 20 cents an hour in shops here. No one is getting what men are in other shops. If it is possible for you to help us, it would be a Godsend to us by organizing the men into a union.

88. CIGAR MAKER—Council Bluffs. The Bureau of Labor should show the difference between organized and unorganized labor.

91. CIGAR MAKER—Dubuque. The Bureau of Labor can promote the interest of wage earners, by giving strict attention to the duties of the office, and by securing the aid of organized labor.

92. CIGAR MAKER—Marshalltown. Publish the facts concerning differences that arise between employer and employe during strikes. Your method of finding out the condition of the laboring men is a very good one.

95. CIGAR MAKER—Oskaloosa. My home was built and paid for while I was in business between 1882 and 1890. At no time since, working for wages, could I have saved enough. The best way to promote the interest of wage-earners would require national legislation. I believe it to be the duty of government to provide employment or the means to obtain it. The state could do much in this direction by buying lands and renting same to men out of employment, furnishing implements, seeds and stock. In this way men would not be idle at any time, and of course would be a consuming force at all times with no depressions or panics to follow. I am thoroughly imbued with the idea that there are few men who would not work if they had the opportunity to do so. Tramping would be decreased, if not a thing of the past. It may be said "there is plenty of work to do now, but still the tramp is on the go." This is an evidence of the demoralization of business. An honest man gets a job one day, and the next gets discharged, because, as his employer says, "there is no demand for my goods." A man cannot anchor anywhere or endeavor to establish a home and bring others into the world to suffer, and so he drifts from place to place and is lost to the government as a useful citizen, his family and his friends. These evils could be remedied by the state and national government by following the plan previously suggested. If wage-earners in large cities could get an opportunity to get back to the land they would make good consumers, and lessen competition for jobs in the shops and factories.

105. RETAIL CLERK—Boone. Publish facts in all cases, and faithfully execute all laws which the commissioner has power to enforce. A greater appropriation should be made by the state, so that the work of the Bureau

might be enlarged and better opportunities given the commissioner to secure statistics personally.

108. **SHIPPING CLERK**—Des Moines. The Bureau of Labor should be given a wider scope and be more liberally treated by the General Assembly. It should be empowered to open free employment offices and furnish the farmer during busy seasons with enough reliable help, of industrious habits and good character, so that the farmer would not be afraid to have such people on his premises. This would enable hundreds who are crowded in factories and stores to have a change of air, a change of exercise, a change of association, and a little extra change in their pockets, once in a while. It would do the farmer good also. He would be able to see and understand how the other half lives, and the whole state would be blessed. The Bureau of Labor is the most important department of state, but those in authority who enjoy privileges seem to be afraid of it, and not allow the department a chance to work out its own destiny. The Bureau of Labor should have authority to investigate pending disputes between masters and men, and try to stop strikes by helping settle the trouble before it gets too bitter. Give the Bureau a chance.

170. **LOCOMOTIVE FIREMAN**—Des Moines. The Bureau of Labor should have an increased appropriation and furnished regular factory inspectors, so that every factory in the state may be inspected semi-annually, and make an annual report instead of a biennial one, as at present. Iowa should keep pace with Missouri at least, a state board of mediation and arbitration; also a free employment bureau should be provided, under the supervision of the Commissioner of Labor. Iowa is the very last in the processions of states that maintain a Bureau of Labor.

173. **LOCOMOTIVE FIREMAN**—Waterloo. The Bureau should have means to interview laborers personally regarding their hours, wages and working conditions.

182. **LABORER**—Ottumwa. Wage-earners should be directly represented in city, state and national legislatures, and help remedy some of the evils now existing. The landlords and other powerful interests have controlled legislation so the wage-earners' interest is ignored.

191. **MACHINIST**—Davenport. The growing importance of Iowa as a manufacturing state demands more consideration for her laborers and mechanics than has so far been given them by her law-makers.

196. **MACHINIST**—Marshalltown. The Bureau of Labor needs more help for factory inspection, and more money to collect statistics personally. People can explain their conditions much better orally than they can describe them on paper by correspondence.

207. **MACHINIST**—Waterloo. I hope larger appropriations may be given the Bureau, so that still more thorough investigations can be made. The working classes are reaping much good from your efforts in their behalf.

209. **METAL WORKER**—Des Moines. I believe the labor organizations should support the Winnetka system of direct legislation. They could then strike the trusts and combines by their vote, and the majority would rule.

230. **MINER**—Centerville. Enough copies of the Bureau reports should be printed so as to distribute to all the wage-earners, so they may become educated and take an active interest in studying the economic questions of the day.

233. **MINER**—Coalfield. The Commissioner of Labor should be vested with authority and provided with sufficient funds to allow him to investigate the sanitary conditions of the mining camps. These company houses are huddled together in as close a space as possible. The water closets have very shallow vaults, and often no vaults at all. Then the drinking water wells are located in the same yards too close to the closets, and many of the wells contain only surface water, making the sanitary conditions of many mining camps a terrible menace to health. In the summer months typhoid fever, malaria and other contagious diseases sweep

through the camps. Fifteen and twenty persons are often sick with typhoid fever at one time in one camp. This is a serious question, and of vital interest to the miners. The companies charge exorbitant rents for these shanties, and should be compelled to furnish proper conditions.

233. **MINER**—Des Moines. The bureau should give public statements of the net earnings of labor as against net profits to employers as a result from labor. The enactment of laws providing for an arbitration board to settle labor disputes, is also advisable.

239. **MINER**—Diamond. Foreign immigration should be restricted. English-speaking men can hardly get employment on account of men from Italy, Austria and Hungary, who do not know the value of their labor, being preferred by employers, who pay them what they see fit. Their standard of living is too low for an American to stoop to.

240. **MINER**—Eveland. Safety and sanitary laws should be enforced in this camp. There are fifteen houses containing large families, and only one well to supply them with water, and the well is in poor condition.

246. **MINER**—Lehigh. The government should run the coal mines on the collective ownership and distribution plan, so each person could obtain the full product of their labor.

247. **MINER**—Lost Creek. The Bureau of Labor should prosecute a thorough investigation of conditions, and publish the facts.

252. **MINER**—Oskaloosa. I am convinced the usefulness of the Bureau is limited, owing to the meager amount of funds at its disposal to carry out the work intended and the wage-earners do not co-operate as they should to make the Bureau a success.

262. **MOLDER**—Davenport. If you really want to help the workingman give us a shorter workday and a good "old Puritan Sunday." We have too much time to get drunk and not enough to get educated. Morality, sobriety and horse sense will induce men to observe the Golden Rule.

266. **PAINTER**—Cedar Rapids. We painters have to adapt ourselves. I sometimes work for a firm, sometimes by contract for myself, often idle three or four weeks at a time. I made \$400 in wages in 1901, averaging \$33.33 per month, or \$1.35 per day. During the first eight months of 1902 I made \$345; monthly average \$43.12, or \$1.66 per day. I expect my wages for this year will foot up to \$520.

284. **PRESSMAN**—Dubuque. The Commissioner of Labor should totally fulfill his duty as required by law, and that he use his best efforts to get the bureau from under the limit restrictions. Girls in short dresses strip and handle tobacco in the factories here. No girls under 18 should be permitted to work in such places.

298. **PRINTER**—Iowa City. The Bureau of Labor should let the people know all the good it is doing, so a healthy sentiment would grow strong enough to persuade the general assembly to give the Bureau more funds and more help. Industrial workers should have as much attention from the state as agriculturists.

303. **PRINTER**—Sioux City. The Bureau of Labor is the most important commission of the state, and should have more funds and more help to protect employes. A special advertising fund should be allowed to interest capitalists to locate in the state, so that its resources may be more fully developed.

313. **STONE CUTTER**—Cedar Rapids. The interest of the wage-earner cannot best be promoted by strikes or arbitrary means, but by establishing a close relationship and freer exchange of confidences between employer and employe. I am a thorough union man, with different views from the majority as regards justice and the betterment of the condition of the laborer. Labor is blind. Let labor exchange places with capital, and he would be a thousand times worse than his own judgment of capital.

333. **TAILOR**—Cedar Rapids. If a more loyal and general support of home industries were given, especially to our trade, it would be appreciated. Foreign made, sweat shop and penitentiary products should be so labeled or prohibited.

337. **TAILOR**—Ottumwa. The people of the state in general appreciate the good work accomplished in the Labor Bureau, but full service cannot be rendered by this valuable department without a larger force and more funds. And we earnestly recommend and ask for a more liberal appropriation, that will compare favorably with neighboring states.

338 and 339. **TAILORS**—Waterloo. Continue to give us the naked truth, as in last reports. We favor public ownership of monopolies.

385. **SCHOOL TEACHER**—Duncombe. I am very thankful for the information so promptly furnished. There would be no reason to complain if all public officials would be as accommodating.

394. **HORSESHOER**—Sioux City. For the protection of horse owners, all horseshoers should be required to pass an examination on the horse's foot.

WAGE EARNERS OF IOWA.

SPECIAL TELEGRAPH OPERATORS.

The replies given by the railroad station agents and railroad telegraph operators on the Individual Wage Earners' Schedule to questions No. 20 and No. 21 together with statements made under "Remarks" merits a separate subdivision of this chapter in order to attract attention to the statements made by this especially worthy, responsible and intelligent class of wage earners.

It will be noted that these statements are not listed under the same numbers given them in the table, because if that method had been followed it would have been an easy matter to identify the persons furnishing the information and on account of the fact that in many of the localities there is but one such person employed, neither is the locality mentioned because of the same reasons.

The statements made are of such a serious character and are couched in such a pathetic and modest tone coupled with such reasonable and ultra conservative requests for improved conditions that it is hoped that the members of the Thirtieth General Assembly will give these matter sufficient attention so as to provide a remedy for the exposed dangers and existing abuses.

500. **TELEGRAPH OPERATOR AND STATION AGENT.** Railroad companies should keep extra operators to relieve extra men for at least two weeks every six months.—We often cannot get any vacation at all.

501. **TELEGRAPH OPERATOR.** We should be allowed our Sundays off, or at least every other Sunday, by some reasonable arrangement.

502. **STATION AGENT.** If the state would, through the governor, appoint a board to examine all railroad telegraphers, and then furnish them a certificate if capable, it would reduce the number of aspirants 25 per cent and necessitate the railroad companies paying better wages to those who were competent. There are 25 per cent of the telegraphers employed by railroads who are incompetent, and who not only endanger the lives

of the railroad employes, but the traveling public, and cause numerous losses of freight in transit. This is a serious expense and annoyance to business men, and might be removed if influential public men would try and remedy it by legislation. The railroads might try and "lobby" a bill like that to death, because it would appear to take money out of their pockets.

503. STATION AGENT. A commission should be established to examine telegraph operators and allow only competent men to be employed. Some of our largest railroad systems have the most incompetent men and boys employed because they are "cheap." The combinations that are watering their holdings to several times their value will eventually bring hard times on us if they are not controlled by legislation. "Water will sooner or later find its level," and some plan should be devised to work for national legislation along this line.

504. AGENT AND OPERATOR. You ask: "Do you own a home?" I reply: No, not here. Would not consider it safe for a station agent on this line to invest in property. The wages are already so low that I barely make a living, but they would be cut as soon as the company found I was tied. I never drink, smoke or chew, am strictly temperate, but know that no man should handle trains after being on duty fifteen hours. It is a base injustice. The traveling public should never stand it and risk their innocent lives, little realizing such things are being done. I have seen an operator at M—— take an order to hold "number" —— to meet "number" —— at M——, instead of at W——. This was at 3 A. M. He had been at work since 7 A. M. the previous morning.

505. TELEGRAPH OPERATOR. Several positions on each division have recently been raised on account of the operators on the system organizing. Ninety per cent at this writing are now members, and a committee is going to meet officials at Chicago and try to secure a schedule with an increase of pay with better conditions under which to work, with extra compensation for overtime. Legislation for an eight-hour day is desirable, and a state board of examiners with power to refuse persons employment as telegraph operators unless they pass satisfactory examinations on ability.

506. TELEGRAPH OPERATOR. Legislature should pass a law requiring every telegraph operator to pass an examination before some state official as to his or her ability as an operator.

507. STATION AGENT. The Bureau of Labor should call public attention to whatever abuses labor may be suffering from, and call the attention of the laboring classes to evils they could avoid, viz: Spending wages for liquor and other hurtful things.

508. AGENT AND OPERATOR. Fixed salaries should be paid instead of commissions.

509. TELEGRAPH OPERATOR, CLERK AND LEVERMAN. Eight-hour day, extra pay for Sundays and legal holidays. State board of examiners to issue certificate of capacity to railroad operators. Consider this would be to the interest of everyone who is a patron of a railroad.

510. STATION AGENT AND RAILROAD OPERATOR. Legislation wanted so we will not remain on duty to exceed fifteen to eighteen hours without eight hours' rest.

511. STATION AGENT AND TELEGRAPH OPERATOR. This country is now overrun with so-called telegraph operators the product of many schools. On account of their willingness to work cheaper they crowd out old and experienced men. A state board of examiners to pass on an operator's ability would be a blessing to the telegraphers, and also a protection against wrecks if a man was obliged to show fitness and ability before engaging as a telegrapher to a railroad company.

512. RAILWAY AGENT. If only something could be done to increase wages and place them on a living basis, and not just a bare existence.

514. STATION AGENT. Under the present wage system it is difficult to legislate for our occupation, except, possibly, to shorten hours. If the

wage-earners were educated to support men for office who favor direct legislation and government ownership of public utilities, there might be some relief for the workers against monopoly.

515. **OPERATOR AND AGENT.** A law compelling operators to pass state examinations (as is done with pharmacists), would cause fewer wrecks. Government employes should carry United States mail from depots to post-office. This takes an agent's time just when he has most business to attend to.

516. **TELEGRAPHER.** Limit the number of hours labor on Sundays one-fourth.

517. **RAILROAD STATION AGENT.** Specific state legislation for our occupation is required that will secure Sunday rest by making the rate of pay double for Sunday work, with a heavy penalty for violation. At our present rate of degeneration on the Sunday question all society will soon be demoralized. Every railroader in the country needs his Sunday rest; practically none are getting it. On our line half the station men should rest at least every alternate Sunday, the other half the other alternate Sunday. All commodities, except perishable, should be sidetracked Sundays. Stock shippers should not be allowed to load and ship stock on Sunday. Monday is just as good for every purpose, and all interests should be controlled with this one point in view, to minimize Sunday labor, and by this means make more happy homes among railroad employes.

518. **AGENT AND OPERATOR.** Better federation is required among wage-earners, looking more closely to their interests in the legislature.

519. **TELEGRAPH OPERATOR.** Compel telegraphers to pass an examination and show their capability before allowing them to handle trains. The business is being ruined by students and young men who are willing to work for anything. A railroad operator by making a simple mistake can be the direct cause of a number of deaths. Why is it not as important for examinations and experience of telegraph operators as for pharmacists? This would tend to make a better class of men to be placed in the field, and improve conditions.

520. **STATION AGENT.** Our business should be paid on a straight salary basis. I get \$20 per month and 3 per cent commission on all freight shipped and received, and the wages depend on the amount of business received, making my average about \$50 per month, Sunday included.

521. **TRAIN DISPATCHER.** A law is required for telegraphers to show qualification to do such work and be of mature age. The business is overrun with boys under age on account of wages being so low. Competent men cannot be kept at present wages. Several accidents have been avoided by narrow margins on account of incompetent operators, and the accidents that do occur nearly all happen by the urging of employes to work beyond their capacity, in this way overlooking important items. Mistakes occur by long hours and close confinement and not sufficient time allowed for men to care for their physical conditions. It seems to be forgotten that there is a limit to human endurance. More men operators should be employed, so as to not scatter night offices, thereby increasing liability of accidents. There is an organized movement now on foot to better conditions among this class of service, and the outlook is fair for an improvement.

522. **STATION AGENT.** Legislate to compel railway companies to reduce our hours to ten per day, and pay a minimum salary of \$60 per month, with 25 cents an hour for overtime.

525. **AGENT AND TELEGRAPH OPERATOR.** If something could be done to advance wages in proportion to the cost of living, it would be a blessing. We are drawing the same rate of pay as in former years, and our living expenses are at least 33.1-3 per cent higher. We can save nothing; do well to live.

RAILROAD EMPLOYEES OF IOWA.

The following investigation of conditions surrounding the employment of railroad men in transportation service has been made in accordance with instructions to the Commissioner in section 2470 of the Code and in order to cover as nearly as possible "all branches of labor in the state," as well as to endeavor to correctly portray the exact conditions under which this portion of Iowa wage earners are employed.

The chapter consists of two parts, the first containing two (2) tables covering actual working conditions and the proportionate safety methods in vogue, together with a running summary of replies from railroad employes which could not be placed to advantage in table form and which deals entirely with the systems of discipline in practice on the various railroads, with expressions from the employes stating their preferences and reasons why.

The second part of the chapter contains the most complete record of accidents that was possible to secure which affected railroad employes only and that happened on the railroads of Iowa during the last two years and a half.

The second part of the chapter also contains a running summary of remarks from railroad employes on the conditions under which they are employed with their suggestions for practical remedies that might be reasonably and inexpensively adopted which would prevent many of the serious accidents to which they are now exposed. In addition an able article from the pen of D. L. Cease, editor of the *Trainmen's Journal*, on Railroad Accident Statistics, is included because it is specially appropriate to the subject under investigation and has been compiled from the records of the United States Interstate Commerce Commission.

The material for this chapter was collected on the following schedule.

RAILROAD EMPLOYEES IN TRAIN SERVICE.

1. On what railroad system are you employed?..... 2. Length of division over which you run, in miles?..... 3. Average number of miles run per month during the past year?..... 4a. Average number of hours consumed in going over division on passenger trains?..... 4b. On time or through freight trains?..... 4c. On local or way freight trains?..... 5. What age limits, if any, govern your employment?..... 6. What is the maximum number of cars (loaded or empty) hauled in one freight train on the road where you are now employed?..... 7. State the greatest number of cars (loaded or empty) you have ever hauled in any one freight train?..... 8. Was it single or double header?..... 9a. What system of discipline are you working under?..... 9b. What system do you prefer?..... 9c. State why?..... 9d. If working under the Brown or demerit system are you taken out of service for errors or violation of rules, pending investigation?..... 10a. What number of hours are you allowed for rest during busy seasons?..... 10b. Do you have difficulty to obtain time for this needed rest?..... 10c. State longest time you have been on continuous duty in the last two years?..... 10d. How frequently has this occurred?..... 11. Do engines have double glass with air space in front windows of cab (commonly known as frost glasses?..... 12a. Are double headers operated on passenger trains?..... 12b. Or on freight trains?..... (On the road where you are now employed.) 13a. Are engines run over road backwards without headlights or pilots on the tender?..... 13b. Are engines without train allowed to go over the road without conductor in charge?..... 14. Are water gauge glasses properly guarded on engines on the road where you are now employed?.....

Table No. 1 consists of a tabulation of questions No. 1, 2, 3, 4a, 4b, 4c, 5, 6, 7, 10a, 10c and No. 11.

Table No. 2 consists of a tabulation of questions No. 10b, 12a, 12b, 13a, 13b and No. 14.

The running summary on disciplinary methods in vogue on the different railroad systems in the state consists of replies to questions No. 9a, 9b, 9c and 9d.

The accidents reported in table No. 1 of Part II are in response to returns received in detail to answers of questions No. 6, 7, 8, 9, 10, 11, 12, 13 and 14 on the schedule.

CONDUCTORS.

An analysis of table No. 1, Part I. shows for the conductors reporting that their average mileage run per month during the past year was 3,408 miles; the average length of the divisions over which they ran was 140½ miles; the average length of time consumed per trip on time freights was nine hours and fifteen minutes, for way freights the average was twelve hours and twenty minutes.

The longest continuous time on duty without rest reported by conductors was fifty-one hours and the shortest record for continuous duty was twelve hours as the longest time without rest.

The average minimum number of hours allowed for rest between trips was eight hours and thirty minutes.

The highest maximum age limit reported at which a conductor could secure employment on a railroad is thirty-five years, the lowest maximum age limit twenty-six years and the average thirty-three and one-half years.

The largest number of cars ever handled in any one train was reported as 104 cars, the lowest number reported as the largest train was sixty-two cars and the average number of cars in the largest trains handled by conductors is eighty.

ENGINEERS.

For the engineers reporting the average mileage run per month was 3,056 miles, the average length of divisions as 128 miles, the average number of hours consumed per trip on time freights, nine hours; and on the way freight, fifteen hours.

The longest continuous time on duty without rest reported by engineers was thirty-seven hours and the lowest record for continuous duty without rest was fifteen hours.

The average minimum number of hours allowed for rest was reported as eight hours and twenty minutes.

The highest maximum age limit reported at which an engineer could secure employment on a railroad is forty-five years, the lowest maximum age limit thirty-five years, and the average for all roads with the exception of one instance where it was reported as forty-five.

The largest maximum number of cars ever handled in any one train was reported as 89 cars, the lowest maximum number 45 cars, and the average maximum number of cars handled in any one train was 60.

Of the number reporting 41 per cent have frost glasses provided in the front windows of cabs, and 59 per cent report that their engines are not so equipped.

FIREMEN.

The average miles run per month by the foreman reporting was 2,933 miles; the average length of division 148 miles; the average time consumed per trip on time freights ten hours, and on way freights fourteen hours.

The longest continuous time on duty without rest reported by firemen was thirty-nine hours, and the shortest record for continuous duty was fourteen hours as the longest time without rest.

The average maximum number of hours allowed for rest was eight hours and fifteen minutes.

The highest maximum age limit reported at which a fireman could secure employment on a railroad was thirty-five years, the lowest was twenty-five and the average twenty-seven years.

The largest number of cars ever hauled in any one train was seventy-five cars, and the lowest number reported as the largest train was twenty-eight cars and the average number of cars reported as the largest trains handled by fireman was fifty-eight cars.

Of the number reporting 60 per cent of the firemen said they have no frost glasses provided for front windows of cabs and 40 per cent report they are so equipped.

TRAINMEN.

The average miles run per month by trainmen reporting is 3,097 miles; the average length of division $127\frac{1}{2}$ miles; the average time consumed per trip on time freights as ten hours, and on way freights fourteen hours.

The longest continuous time on duty without rest reported by trainmen was fifty-two hours, and the shortest record for continuous duty was twelve hours as the longest time on duty without rest.

The average minimum number of hours allowed for rest between trips was eight hours and twenty minutes.

The highest maximum age limit reported at which a trainman could secure employment on a railroad was forty-five years, the lowest was twenty-six years and the average thirty-three years.

The largest number of cars ever handled in any one train was eighty-six cars, the lowest number reported as the largest train was forty cars, and the average number of cars in the longest trains hauled by trainmen was sixty-nine cars.

TABLE No. 2.

This table discloses that 21 employes have difficulty in securing sufficient time for rest between trips, and thirty-five do not have difficulty.

Of the number reporting twenty-seven employes state double headers are used on passenger trains, and thirty report double headers are not so used.

Fifty-four employes report double headers are used on freight trains and three report "No."

Forty-four employes report that engines are run over road backwards, without headlights or pilots on tenders, and twelve report "No."

Thirty employes report engines are run light, over road without conductor in charge and twenty-seven report "No."

Thirty employes report water guage glasses are properly guarded, and twenty-two report "No."

AVERAGE ANNUAL EARNINGS.

Conductors—The average maximum annual earnings of conductors on the mileage basis of those reporting at the maximum rate paid of \$3.45 per 100 miles would amount to \$1,410, the average minimum annual earnings on the same mileage basis at the minimum rate of \$3.00 per 100 miles would amount to \$1,224.00.

Engineers—The average maximum annual earnings of engineers on the mileage basis of those reporting at the maximum rate of \$4.50 per 100 miles, would amount to \$1,650.00; the average minimum annual earnings on the same mileage basis at the minimum rate of \$3.50 per 100 miles would amount to \$1,283.00.

Firemen—The average maximum annual earnings of firemen on the mileage basis of those reporting at the maximum rate of \$2.50 per 100 miles would amount to \$880.00; and the average minimum annual earnings on the same mileage basis at the minimum rate of \$2.25 per 100 miles would amount to \$790.00.

Trainmen—The average maximum annual earnings of trainmen on the mileage basis of those reporting at the maximum rate of \$2.20 per 100 miles would amount to \$817.00; and the average minimum annual earnings on the same mileage basis at the minimum rate of \$2.00 per 100 miles amount to \$743.00.

RAILROAD EMPLOYES OF IOWA—TABLE No. 1—PART 1.

CONDUCTORS.

Employed by	Average number of miles run per month.	Number miles in division.	Average Hours on Duty Per Trip.		Longest time on duty past two years without rest.	Minimum number of hours allowed for rest.	Maximum age limit to begin employment.	Largest number of cars ever hauled.	Cab windows equipped with frost glass.
			Time freight.	Way freight.					
Chicago & North-Western.....	3,000	190	14	16	20	8	35	80	No.
Chicago & North-Western.....	3,100	160	9	a	21	10	a	73	No.
Chicago & North-Western.....	5,000	150	b	b	18	10	30	a	a
Chicago & North-Western.....	4,000	197	c	c	16	10	35	81	No.
Chicago & North-Western.....	1,458	7	25 m	35 m	32	d	No.	23	No.
Chicago & North-Western.....	2,000	133	9	e	29	8	35	10	No.
Chicago, Milwaukee & St. Paul.....	2,800	121	12	12	30	8	35	104	a
Chicago, Milwaukee & St. Paul.....	3,000	116	6	12	24	8	35	76	Yes.
Chicago, Milwaukee & St. Paul.....	3,000	115	6	12	48	7	35	68	Yes.
Chicago, Milwaukee & St. Paul.....	2,600	137	14	12	32	a	26	90	Yes.
Illinois Central.....	6,000	168	7	11	12	8	a	62	Yes.
Chicago, Burlington & Quincy.....	2,800	98	5	10	86	8	No.	71	No.
Chicago, Great Western.....	3,000	133	9	e	51	8	35	80	No.

a Not reported. b Passenger conductor. c Through freight division 118 miles, consumes 10 hours; way freight division 87 miles, consumes 10 hours. d No definite amount. e Way freight division 86 miles, consumes 12 hours. f 51 hours only once, frequently 30 to 36.

ENGINEERS.

Chicago & North-Western.....	2,732	150	8	15	23	8	35	65	No.
Burlington & Western.....	2,000	105	a	12	96	b	a	45	No.
Chicago, Rock Island & Pacific.....	3,800	97	7	9	15	b	No.	50	Yes.
Chicago & North-Western.....	4,000	202	a	a	a	a	35	a	Yes.
Chicago Great Western.....	3,000	133	10	15	37	8	35	53	No.
Chicago Great Western.....	3,000	155	8	16	24	10	35	50	No.
Chicago & North-Western.....	4,000	67	6	a	a	8	35	48	No.
Atchison, Topeka & Santa Fe.....	8,000	105	9	10	21	8	45	83	No.
Achison, Topeka & Santa Fe.....	2,200	105	8	12	22	8	45	78	No.
Chicago & North-Western.....	a	122	8	15	96	8	35	62	Yes.
Chicago, Milwaukee & St. Paul.....	3,500	116	8	11	24	8	35	60	Yes.
Chicago, Milwaukee & St. Paul.....	8,200	116	a	a	a	8	35	a	Yes.
Fremont, Elkhorn & Missouri Valley.....	2,600	118	10	18	17	8	35	60	No.
Fremont, Elkhorn & Missouri Valley.....	2,600	118	7	18	18	8	35	52	No.

Iowa Central	8,000	190	15	a	24	28	10	a	85	64	No.
Chicago, Milwaukee & St. Paul	8,954	189	10		24	24	8		85	63	Yes.
Chicago, Milwaukee & St. Paul	8,400	189	10		24	82	8		85	70	Yes.

a Not reported. b No definite time allowed.

FIREMEN.

Chicago & North-Western	2,000	149	10		14	39	8		27	75	No.
Chicago & North-Western	2,400	149	10		12	37	8		27	64	No.
Chicago & North-Western	2,194	238	a	a	a	14	8		27	50	No.
Chicago Great Western	3,000	180	a	a	16	30	8		25	60	Yes.
Chicago, Milwaukee & St. Paul	8,000	180	9			35	8		25	28	No.
Keokuk & Western	a	162	b	b	b	82	8		35	60	Yes.
Illinois Central	2,000	149	10		14	18	8		27	55	Yes.
Chicago & North-Western	3,000	99	12	a	a	14	8		27	55	Yes.
Illinois Central	4,000	137	8		12	15	8		26	70	No.
Chicago, Rock Island & Pacific	2,800	145	13		16	82	10		28	66	No.

a Not reported. b Through freight 8 to 30 hours; way freight 12 to 30 hours.

TRAINMEN AND SWITCHMEN.

Burlington, Cedar Rapids & Northern	5,000	98	a	a	a	10	a	a	30	a	a	No.
Chicago & North-Western	3,000	85	a	a	b	12			30			No.
Chicago, Rock Island & Pacific	2,000	97	10	6	14	34	8		27			No.
Chicago, Burlington & Quincy	2,800	86	14			20	c		a			No.
Chicago, Milwaukee & St. Paul	3,000	135	d	d	e	23	10		27			Yes.
Chicago & North-Western	3,000	145	d	d	e	32	10		30			Yes.
Chicago & North-Western	a	145	d	d	e	52	8		34			Yes.
Chicago, Rock Island & Pacific	3,200	113	11	12	14	44	8		45			No.
Achison, Topeka & Santa Fe	3,000	113	11	12	14	31	8		45			No.
Achison, Topeka & Santa Fe	3,000	137	10	14	14	50	8		6			Yes.
Chicago, Milwaukee & St. Paul	2,000	221	a	7	a	48	8		45			No.
Chicago, Burlington & Kansas City	a	100	f	f	a	24	8		a			No.
Chicago Great Western	2,500	f	f	f	f	12	12		a			No.
Chicago & North-Western	2,750	137	10	16	16	48	8		a			Yes.
Chicago, Milwaukee & St. Paul	2,750	137	10	16	16	35	8		g			Yes.
Chicago, Milwaukee & St. Paul	3,000	173	a	10	18	85	8		g			Yes.
Chicago, Rock Island & Pacific	8,000	116	a	a	18	28	8		14			No.
Chicago & North-Western						28	8		27			No.

a Not reported. b From 10 to 24 hours. c Employees are usually allowed more than 8 hours rest if they demand it. d From 6 to 15 hours. e From 10 to 15 hours. f In yard service as switchman. g Limit unknown but young men always given preference.

RAILROAD EMPLOYES OF IOWA—TABLE No. 2—PART 1.

	Number Conductors Reporting.		Number Engineers Reporting.		Number Firemen Reporting.		Number Trainmen Reporting.		Total.	
	Yes.	No.	Yes.	No.	Yes.	No.	Yes.	No.	Yes.	No.
Do you have difficulty in obtaining time for rest between trips?..	6	6	4	18	5	5	6	11	21	35
Are double' headers operated on passenger trains?.....	5	7	8	10	8	2	6	11	27	30
Or on freight trains?.....	10	2	18	.....	9	1	17	.....	54	3
Are engines run over road back- wards without headlights or pilots on the tenders?...	9	8	18	4	7	8	15	2	44	12
Are engines without train allowed to run over the road without conductor in charge?	5	7	10	8	8	7	12	5	30	27
Are water gauge glasses properly guarded on engines?.....	4	8	11	7	7	8	8	9	30	22

SUMMARIES OF REPLIES BY RAILROAD WAGE EARNERS TO THE FOLLOWING QUESTIONS.

What system of discipline are you working under? What system do you prefer? Reasons why? If working under the Brown or demerit system are you taken out of service for errors or violation of rules, pending investigation?

Conductors—Fourteen (14) replied; five (5) of whom work under the Brown or demerit system and nine (9) under the time serving system. Six (6) prefer the Brown system, "because a man is sure of regular employment as long as the job lasts; it stimulates a man's honor and does not injure the family financially; saves loss of time; and allows a man to work while he is able." One (1) prefers the suspension or time serving system, "because, it is more effective." Three (3) conductors report they are taken out of service pending an investigation while working under the Brown system and two (2) report "they are not."

Engineers—Sixteen (16) replied: eight (8) of whom work under the Brown system; six (6) under the time serving system, and two (2) under an adaptation of both systems. Eleven (11) prefer the Brown, because as seven (7) say, "it saves loss of time; one (1) I do not want my family to suffer for my shortcomings: one (1) it improves the service." Two (2) prefer the time serving system; one (1) "because, it is satisfactory; and one (1) says, "the system is handled by the officials of this company justly." One (1) has no preferred system, "because subordinate officials place their own construction upon the technicalities of the language in order to assert their authority." Seven (7) engineers assert that men are laid off pending investigation under the Brown system and two (2) say they are not.

Firemen—Eleven (11) replied; five (5) work under the Brown system, two (2) under the time serving, and four (4) under an adaptation of both. Four (4) prefer the Brown system, two (2) "because it saves loss of time," one (1) "because it does not interfere with family necessities," and one (1) "because the system is more reasonable when handled justly." Five (5) who work under the Brown system also say, "they have to lose time pending investigation with the company employing them."

Trainmen—Fifteen (15) replied; eight (8) of whom work under the Brown system, five (5) under the time serving system; and two (2) under the standard system. Eleven (11) prefer the Brown system, four (4) "because it saves loss of time, three (3) "because it is more reasonable when handled properly," two (2) "because a man gets credit for good work which makes it an incentive to do better," and one (1) "because suspension never rectifies mistakes, no man makes mistakes willingly or willfully, suspension hurts the family and not the employe." Two (2) prefer the standard system, "because it is the safest and most complete and covers more points of interest." Six (6) who work under the Brown system say "men are taken out of service pending investigation," and five (5) say, "not."

RAILROAD EMPLOYEES OF IOWA—TABLE No. 1—PART 2.

ACCIDENT STATISTICS.

ENGINEERS AND FIREMEN.

Name.	Locality.	Date of Accident.	Cause of Accident.	Result.
James Zuver	Missouri Valley ..	Dec. 1, 1901	Head-on collision...	Killed.
Lewis Albright	226 Fort Dodge ..	Sept. 24, 1901	Struck by mail crane	Killed.
Chas. Holman	117 Mason City ..	Dec. 19, 1901	Run over by engine..	Killed.
John T. White	146 Oskaloosa ..	Feb. 16, 1902	Killed in wreck ..	Killed.
C. F. Russell	159 Cedar Rapids ..	June 21, 1902	Lost left eye	Lost left eye.
H. L. Bechtel	125 Clinton	May 15, 1903	Struck by an engine.	Killed.
John Erricoson	118 Des Moines ..	June 27, 1903	Head-on collision ...	Killed.
O. K. Rowe	838 Osceola	Dec. ... 1901	Head-on collision ...	Killed.
Engineer	Gifford	Feb. 15, 1902	Head-on collision ...	Killed.
Engineer	Gifford	Feb. 15, 1902	Head-on collision ...	Killed.
S. D. Markress	Perry	Aug. 6, 1902	Head-on collision ...	Killed.
F. M. Brame	Perry	Aug. 6, 1902	Head-on collision ...	Killed.
M. J. Mangan	Sioux City	March 3, 1901	Head-on collision ...	Killed.
T. F. Dolan	64 Sioux City	Oct. 24, 1901	Railroad accident ..	Killed.
M. Calderwood	236 Marion	Oct. 14, 1901	Railroad collision ..	Killed.
Edward Young	238 Etherville	May 7, 1901	Run over by cars ..	Killed.
Joseph Kessler	391 Fort Madison ..	Feb. 16, 1901	Railroad accident ..	Killed.
Fireman	Gifford	Feb. 15, 1902	Head-on collision ...	Killed.
Fireman	Gifford	Feb. 15, 1902	Head-on collision ...	Killed.
William E. Thorp	Manilla	Aug. 6, 1902	Head-on collision ...	Killed.
Martin J. Mangan	64 Sioux City	March 3, 1901	Fell from engine ..	Killed.
Geo J. McNett	222 Fort Dodge ..	Dec. 10, 1901	Struck by bridge ..	Killed.
Wm. Struckman	30 Waterloo	Feb. 20, 1903	Railroad collision ..	Killed.
Wm. E. Ashley	34 Clinton	March 29, 1903	Falling from train ..	Killed.
Harry W. Leighton	249 Valley Junct'n ..	May 6, 1903	Falling from engine ..	Killed.
Thos. Fisher	132 Eagle Grove ..	May 26, 1903	Collision	Killed.
W. H. Rice	Clinton	Feb. 3, 1901	Water glass burst ..	Lost right eye
John Fridgin	Dubuque	May 24, 1901	Water glass burst ..	Lost one eye.
L. Rush	Fort Dodge	Aug. 11, 1903	Engine wrecked	Lost right leg
M. F. Carey	Waterloo	Sept. 7, 1903	Engine wrecked	Killed.
Edward O'Brien	Fort Madison	July 25, 1903	Engine wrecked	Killed.
F. T. Williams	841 Waterloo	Jan. 12, 1901	Crash'd between cars	Killed.
J. F. Emberling	12 Ottumwa	Jan. 24, 1901	Fell from train, run over	Killed.
F. S. Gilbert	341 Waterloo	Feb. 20, 1901	Fell from train, run over	Killed.
B. F. Holley	12 Ottumwa	Mar. 29, 1901	Thrown from train, run over ..	Right leg cut off.
H. T. Bickel	183 Clinton	Mar. 27, 1901	Crush'd between cars ..	Left arm amputated.
G. W. Murphy	171 Ft. Dodge	April 4, 1901	Left foot run over ..	Amputated.
D. C. Ashley	581 Dubuque	April 11, 1901	Run over by engine ..	Killed.
J. R. Manson	247 Sioux City	April 30, 1901	Fell from train, run over	Killed.
William O'Brien	152 Oskaloosa	Sept. 5, 1901	Fell from car, run over	Killed.
W. W. McMillan	12 Ottumwa	Nov. 4, 1901	Crushed in wreck while switching ..	Killed.
Emil Voelker	60 Dubuque	Sept. 9, 1901	Crush'd between cars	Killed.
F. E. Miller	138 Eagle Grove ..	April 4, 1902	Both legs broken ..	.....
W. L. Harrison	341 Waterloo	May 26, 1903	Attempting to get on foot board of engine	Killed.
E. R. Stickney	341 Waterloo	June 19, 1903	Collision	Killed.
R. M. Patterson	348 Eldon	June 9, 1903	Crush'd between cars	Killed.

ACCIDENTS TO RAILROAD EMPLOYEES—CONTINUED.

TRAINMEN AND SWITCHMEN.

Name.	Locality.	Date of Accident.	Cause of Accident.	Result.
A. W. Dennis	520 Council Bluffs	Nov. 9, 1901	Right foot run over	Amputated.
L. Stack	171 Ft. Dodge	Nov. 18, 1901	Run over by cars	Killed.
M. B. Kirby	567 Keokuk	Nov. 16, 1901	Fell between cars, run over	Killed.
Frank Lyons	247 Sioux City	Dec. 1, 1901	Fell from train, run over	Killed.
G. W. Priest	56 Cedar Rapids	Dec. 19, 1901	Run over both legs	Amputated.
C. E. Jordan	28 Creston	Feb. 4, 1902	Run over while switching	Killed.
C. W. Schweers	28 Creston	April 30, 1902	Knocked from train by pile driver	Killed.
C. P. Ronan	348 Eldon	July 28, 1901	Three fingers crush'd	Amputated.
C. Gilbert	56 Cedar Rapids	May 7, 1902	Right leg run over	Amputated.
M. Larson	602 Des Moines	July 7, 1902	Right foot crushed	Amputated.
J. F. Dowling	56 Cedar Rapids	Oct. 18, 1902	Crushed between cars, switching	Killed.
L. S. Petersen	352 Estherville	Nov. 8, 1902	Crush'd between cars	Killed.
W. P. Bird	546 Vall. y Junc.	Nov. 8, 1902	Fell from train, left leg run over	Amputated.
C. Suppers	212 Belle Plaine	Dec. 4, 1902	Fell between cars, run over	Killed.
P. Bergin	9 Mason City	Mar. 8, 1903	Fell from train, run over	Killed.
O. A. Nowell	152 Oskaloosa	April 24, 1903	Thrown from derailed car	Killed.
W. F. McCauley	551 Dubuque	May 30, 1903	Fell under train, run over	Killed.
W. O. Cunningham	152 Oskaloosa	June 18, 1903	Struck by engine, run over	Killed.
L. T. Stoffell	212 Belle P aine	July 8, 1903	Head crused between end of timber and flat car	Killed.
G. H. Haynes	319 Marion	July 9, 1903	Killed in collision	Killed.
Frank Willis	188 Clinton	July 22, 1903	Fell under car, run over	Killed.
J. J. Oates	485 Carroll	July 8, 1903	Struck by train	Killed.
F. M. Maxfield	247 Sioux City	Aug. 15, 1903	Crush'd between cars	Killed.
W. T. Holliday	188 Clinton	Aug. 20, 1903	Struck by engine, right arm	Amputated.
W. L. Addison	183 Clinton	Aug. 27, 1903	Fell from train, run over	Killed.
John Noonan	86 Perry	Sept. 8, 1903	Run over by train	Killed.

SUPPLEMENTARY ACCIDENTS TO TRAINMEN AND SWITCHMEN.

Name.	Locality.	Date of Accident.	Cause of Accident.	Result.
Frank Benedict	Mason City	1902. Aug. 14	Fell under gravel train	Lost both legs.
C. H. Packard	Odebolt	Dec. 28	Fine in locomotive	Scalding head, face, hands and ankles of both men.
Clyde Bennett	Odebolt	Dec. 28	boiler burst	
John McMahon	Dubuque	1903. Jan. 22	Run over by engine	Killed.
W. D. Carroll	Marshalltown	Feb. 19	Run over by engine	Killed.
J. C. Snyder	Council Bluffs	April 20	Crushed between engine and cars	Killed.
Sylvester Finney	Council Bluffs	April 20	Crushed between engine and cars	Fatally injured.
L. H. Baker	Des Moines	May 1	Run over by train	Killed.
Horace H. Holloway	Cedar Falls	July 26	Run over by train	Killed.
Fireman Carter	Pony Creek Crossing	Aug. 1	Wrecked train	Killed.
Brakeman Moore	Pony Creek Crossing	Aug. 1	Wrecked train	Killed.
Unknown man	Pony Creek Crossing	Aug. 1	Wrecked train	Killed.
Charles McDill	Eldon	Aug. 20	Run over in yard	Killed.
William Klink	Farson	Aug. 25	Run over in yard	Killed.

RAILROAD EMPLOYES OF IOWA.—PART II.

ACCIDENT STATISTICS.

This second part of the chapter on railroad employes of Iowa, is devoted to a report of accidents to railroad employes that have occurred in Iowa since January 1, 1901, and is compiled in compliance with instructions contained in section 2470 of the Code.

This record is as complete as it was possible to obtain them, under the existing circumstances, it is not considered nor must it be accepted as a total or a complete record of all the accidents which have occurred to railroad men in the state for the time covered.

The state law that previously required railroad companies to report all accidents occurring on their lines to the railroad commissioners and whose duty it was to investigate and make a record of the same was repealed in 1897 at the time when the Code was revised.

There is now no state official to whom accidents are required to be made or who can give a complete record of accidents to railroad employes.

However, the accompanying table will show, name, date, cause and result of accidents to eighty-six railroad men in Iowa, covering a period of about thirty-two months. Thirty-five of these accidents occurred in 1903 or during the last nine months. The alarming frequency with which these accidents have occurred, and the apparent increase of their number coupled with the limited means at the disposal of the Bureau to secure these records seems to indicate the necessity of a definite method of securing accurate and complete statistics of this character, and for this reason it has formed the basis of the recommendation by the commissioner that railroad companies in Iowa be required by law to report all accidents to employes to the State Executive Council.

In order to present the most complete report of accidents to railroad employes the Interstate Commerce Commission was requested to furnish the Bureau with a record of all accidents on the railroads of Iowa during the years of 1901 and 1902, as the railroads are directed by act of congress to make such report to that commission, in reply to the request the following letter was received from the secretary, Mr. Edward A. Moseley:

HON. EDWARD D. BRIGHAM, *Commissioner of Labor, Des Moines, Iowa*:

DEAR SIR,—Your letter of the 9th instant, requesting to be furnished with a statement of railway accidents which occurred in the state of Iowa during the years 1901 and 1902, is received.

I regret to inform you that it is impossible for us to furnish you with such a statement for the reasons, first, that the first monthly report of accidents was for the month of July, 1901; second, neither the monthly or yearly reports of accidents are reported or compiled by states, and, third, the compilation of accidents from the yearly report has not been issued yet. In the case of the monthly reports the accidents are returned for the road as a whole; in the yearly reports by groups. I take pleasure in forwarding you a copy each of Accident Bulletins Nos. 1 to 6, inclusive, and the Report on the Statistics of Railways in the United States for the year ending June 30, 1901.

I would be very glad were it in my power to give you such a statement as you desire, and regret that it is impossible to do so.

Very truly yours,

EDW. A. MOSELEY, *Secretary*.

It will be seen by the contents of this letter that the reports as compiled by the Interstate Commerce Commission would be of no especial value to this state for the reason that owing to their method of compilation it would be impossible to ascertain how many accidents had occurred in Iowa, and the information given in their report is only general in its character.

There is therefore no way provided by law to secure complete reports of all accidents on railroads or to railroad men in Iowa.

The record herewith presented represents such accidents as have been reported by the railroad men on schedules and through the officials of the several railroad men's organizations who have in addition to the fraternal and protective features, an insurance that necessitates a record of all accidents to those insured, and any person who was killed or injured in Iowa who was not a member of any railroad organization, or a member who failed to carry insurance in the brotherhoods is not included in this report.

Therefore it is reasonable to suppose that there were a great many more accidents that occurred in the state during the period covered that are not reported in this table.

In addition to the table, there is a running summary of remarks following the table by railroad men in transportation service and the chapter is concluded with a very able article on railroad accident statistics which contains some valuable comparisons.

REMARKS BY RAILROAD MEN ON CONDITIONS.

Running summary of conditions under which railroad men, in transportation service, work, and accidents resulting therefrom.

Details insufficient to enable tabulation.

126. CONDUCTOR—Belle Plaine. Two men lost one limb each, and one man crippled for life, on account of double-heading.

131. CONDUCTOR—Des Moines. One fireman killed and engineer injured on account of a double-header on train. If this train had been a single-header no one would have been injured. Engineer and fireman on rear engine could not see danger on account of escaping steam from head engine. Most of the engines we have to work with are not in a safe condition on account of escaping steam, caused by the neglect of railroad company to keep engines in proper shape. Trains are also run over the divisions with an engine pushing behind but not coupled to train. This is extremely dangerous and should be stopped, as it makes rear end collisions liable.

139. ENGINEER—Boone. The Labor Bureau can promote the interests of railroad men by investigating the conditions under which we are employed, and exposing them, with an earnest appeal to humanity to improve them. Numerous accidents result daily from the extremely long trains we haul.

The freight train I pull oftentimes has fifty cars, very few of which are equipped with air brakes. Passengers as well as crews are exposed to the dangers. I recently pulled a train of seventy-five cars, and have often been on duty for thirty-six consecutive hours. We have frequently pleaded for, and have had numerous promises for relief, but the greed for gain is too great to permit this when it means dollars and cents to a corporation.

145. ENGINEER—Des Moines. Two wrecks occurred with double-headers. The men on the second engines sustained all the injuries. Double-heading works a hardship to all men engaged. The second engine is a veritable death trap, and the additional responsibility on the head engineer is far in excess of the compensation received. The corporations fail to realize there is humanity in the workingman.

153. ENGINEER—Missouri Valley. An engineer was killed on a light engine here on account of worry over an engine which was a new one and working badly. He forgot his meeting point. It could have been avoided had he had a conductor. Reasonable legislation, like the following, should be enacted and enforced: "A maximum day of fourteen hours. Abolish backing up of light engines or engines with trains. Conductors to accompany all light engines."

173. FIREMAN—Waterloo. A lubricator glass broke; cut a fireman's eye out.

318. TRAINMAN—Cedar Rapids. One trainman slipped on ice, fell under wheels, lost both legs. One had his foot caught in guard rail, lost his right leg above knee. One fell from cars, had ribs broken. One thrown off engine in a collision, had his neck broken. One slipped off engine pilot, lost right leg. The Bureau of Labor should compile reliable statis-

tics of accidents, so that the public may know existing conditions we work under.

319. TRAINMAN—Creston. One head end collision; two men killed.

320. TRAINMAN—Des Moines. Buildings are too close to tracks and switch stands in many places. Engine pilots should be equipped with suitable footboards.

329. TRAINMAN—Oelwein. An engineer killed by head end collision.

333. TRAINMAN—Estherville. More rigid car inspection is necessary to provide greater safety for train crews. Grab-irons and stirrups are often gone, and cars remain in service.

327. TRAINMAN—Moulton. Answering questions, "Are your engines run over road backwards without headlights or pilots on the tender?" and "Are engines without trains allowed to go over the road without conductor in charge?" will say a simple "Yes" or "No" is insufficient. One engineer lost his life near here while backing up by striking a horse on a bridge. There is a passenger train on the middle division that backs up every trip for five miles to a point where a turntable is located. Engines are run light every Sunday without a conductor. Stock trains are double-headed from Moulton to Donnelson, one of the engines returns light for sixty-six miles with no conductor in charge. The national and state coupler law equipment is not being maintained. Air brakes and automatic couplers on freight trains are defective and out of repair on more than one-third of the cars, and unfit for use, still the cars are kept in service.

RAILROAD ACCIDENT STATISTICS.

BY D. L. CEASE, EDITOR B. R. T. JOURNAL

Accident Bulletin No. 7, recently published by the Interstate Commerce Commission, covers the accidents reported to the commission as having occurred during the months of January, February and March, 1903, and contains information that is worthy of careful study.

A regrettable feature of this report is the large number of casualties to employees and the alarming increase of such casualties as compared with the number reported for the corresponding period of 1902. Under table No. 3 is reported accidents to employees in coupling and uncoupling cars, while Table No. 4 covers casualties due to falling from and getting on or off cars and engines.

A comparison between the tables published in Bulletin No. 7 and those published in the bulletin covering the corresponding period for 1902, discloses an increase of 33 per cent in the number of employees injured under Table No. 3 and more than 100 per cent increase in the number killed. There is also a large increase in the number killed and injured under Table No. 4.

In this connection it is worthy of note that each succeeding bulletin published by the commission shows an increase in these two classes of accidents over the number reported in the bulletin immediately preceding it. This feature is particularly noticeable with respect to Table No. 3. There being an almost constant increase from Bulletin No. 1, covering the months of July, August and September, 1901, to Bulletin No. 7, now under consideration. This increase and also the increase in the number of casualties due to falling from and getting on or off cars and engines, is shown in the following table:

Bulletin.	Table No.	Employees Killed.	Employees Injured.
No. 1.....	3	80	474
No. 1.....	4	135	1,568
No. 2.....	3	88	574
No. 2.....	4	157	1,873
No. 3.....	3	35	530
No. 3.....	4	124	1,818
No. 4.....	3	40	512
No. 4.....	4	121	1,608
No. 5.....	3	53	584
No. 5.....	4	161	1,765
No. 6.....	3	68	713
No. 6.....	4	189	2,143
No. 7.....	3	76	785
No. 7.....	4	155	2,133
Total Table No. 3.....		834	4,142
Total Table No. 4.....		1,042	12,908
Grand total.....		1,876	17,050

Comparing Bulletin No. 1 with Bulletin No. 7, it will be noted that the number of employees reported killed under table No. 3 has more than doubled, the increase being above 150 per cent, while the number reported injured has increased about 60 per cent. Under table No. 4 the increase in the number killed is 12 per cent and the number injured 30 per cent.

What are the causes of this great increase in the number of casualties to employes? If they can be determined we shall be in a position to point out the proper remedies.

In its Bulletin No. 6 the commission called attention to the fact that some of the railroad companies were in the habit of deliberately omitting from their accident reports all accidents except those which occurred in purely interstate traffic, on the presumption that the law did not require them to report any others. On their attention being called to these omissions the offending companies rendered corrected reports, and it is now quite generally understood that the law contemplates the reports shall be made of *all* accidents, and not simply those occurring in purely interstate commerce.

However, the commission is of the opinion that "the reports made by the railroad companies for the first few months of the operation of the accident-report law were incomplete," which is very likely the case, and it is probably true that a considerable portion of the increase in the number of casualties is attributable to the fact that the later reports sent to the commission by the railroad companies are much more complete than were the earlier ones, and that accidents are now much more fully reported than they were in the beginning.

But the incomplete report theory will not explain all the increase; neither will it explain why there is a greater increase in the class of casualties reported under Table No. 3 than in those reported under Table No. 4. It is reasonable to suppose that where the reports were incomplete with respect to one class of accidents they were also incomplete with respect to the other, and the increase shown by the complete reports ought to manifest itself in pretty nearly the same ratio throughout. If one class did show a greater ratio of increase than the other, it would naturally be the class covered by Table No. 4, because that is the more numerous class of accidents. But the direct contrary is the case. The figures given above show that the casualties classified under Table No. 3 are increasing much more rapidly than those classified under table No. 4, the increase in the former case, as between Bulletins 1 and 7, being 150 per cent in the number killed and 60 per cent in the number injured, as compared with 12 and 30 per cent respectively in the latter case.

It is manifestly true that a large proportion of the coupler accidents are due to defective appliances, and much of the increase here mentioned may safely be attributed to failure on the part of the railroad companies to keep the coupler equipment in proper repair. Take for purpose of comparison Bulletins 3 and 7, which cover corresponding periods of different years, we find seven casualties due to sticking of parts under Bulletin 3 and twelve under Bulletin 7; thirty-nine due to holding up pin by hand under No. 3 and sixty-eight under No. 7; uncoupling without using lever (presumably by reason of defective uncoupling mechanism) thirteen under No. 3 and forty-eight under No. 7. The most fatal subdivision under this classification, "Engaged in operations preliminary to coupling," also includes many accidents that are due directly to the fact that the appliances are not in proper order, making it necessary for men to go between the cars to adjust a defect before making the coupling. Under this head there were forty-seven casualties reported in Bulletin No. 3, while there are one hundred and twenty-seven in Bulletin No. 7; thirteen of the casualties were deaths in the former case and twenty-four in the latter. It is undoubtedly true that traffic was somewhat heavier during the latter period than during the former, and there was a greater number of men exposed to accident, but there can be no disputing the assertion that many of these casualties would not have occurred had the equipment been in proper condition, and it is a fair conclusion that the equipment was not in as good order during the first quarter of 1903 as it was during the first quarter of 1902.

It is pretty hard to get a law that will work with absolute accuracy, and it is impossible to get one that will protect men from the consequences of

their own folly. A certain percentage of fairly preventable accidents, therefore, must be set aside as inevitable, owing to the negligence or carelessness of the men themselves. But however large this class of accidents may be, the fact that men will take chances when they are not required to do so, furnishes no excuse for those railroad companies that fail to do their part in reducing the terrible mortality in the train service of railroads to an absolutely unpreventable minimum. The benefit of safety appliances is largely neutralized if they are not kept in proper condition, and it is impossible to escape the conclusion that the railroads are not doing their part in this important particular.

The practice of scrimping the repairs to foreign cars is a fruitful cause of defective couplers and leads directly to many casualties that might easily be avoided. The number of casualties due to the employment of inexperienced men is not easily determined, but it is undoubtedly considerable of a factor, and there are many accidents of this character that could easily be avoided.

The period covered by these bulletins is from July 1, 1901, to April 1, 1903, a total of twenty-one months, during which there were 17,050 employees injured and 1,376 killed in coupling and uncoupling cars and falling from and getting on or off cars and engines. This is an average of more than sixty-five deaths and eight hundred and twelve injuries each month, or more than two deaths and twenty-seven injuries each day!

The report of Adjutant General Corbin of the War Department shows that the total number of casualties from all causes during our war with Spain was 2,910 (107 deaths and 2,803 injuries). The period covered by the report is five months. We thus see that the war with Spain was responsible for 21 deaths and 560 injuries per month, as compared with 65 deaths and 812 injuries per month to the employees on our railways. The total force engaged in the war with Spain was 274,717 officers and men, and the total number of casualties is but a small fraction more than 1 per cent of that number.

The number of railway employees engaged in the operation of trains on June 30, 1901, as shown by the last published report of the commission, was 256,619, and for purposes of comparison this number may be taken as the average number employed for the twenty-one months under consideration. The total number of casualties during this period was 18,426, which is a fraction more than 7 per cent of the total number of employees engaged. Thus, the man who enters the train service of our railroads is taking seven chances to get killed or injured when the man who enlisted in the war with Spain took one.

The war with Spain was but an incident in our national life. It was responsible for a 1 per cent casualty list for a period of five months.

The operation of trains on our railroads is a necessity; it is one of the prime factors in our greatness as a nation, yet the figures here given show that this wonderful factor in our national life was responsible for a casualty list of 7 per cent during the twenty-one months under consideration.

Succeeding bulletins of the commission will be watched with interest, and it is to be hoped that the tendency of these two classes of accidents to increase in number will show an abatement. There can be no doubt that under the operation of the amended law, which went into effect on the first of September, the conditions will be more favorable to safety. Those accidents due to the non-equipment of locomotives, snow plows, etc., with automatic couplers ought to disappear, while Table No. 4 should show a very marked decrease in the number of casualties, due to the fact that there should no longer be any necessity for men to get out on top of rapidly moving trains for the purpose of controlling their speed by means of the hand brakes, except in cases of emergency.

MANUAL TRAINING.

The investigation of manual training during the previous biennial period indicated that little had been accomplished in this direction throughout the state.

It is impossible for the Bureau to make an exhaustive investigation of the subject during the period this report covers.

Expressions of educators from different localities manifest a desire for more technical information upon this important branch of education.

We therefore reproduce by the courtesy of Hon. Richard C. Barrett, State Superintendent of Public Instruction, his splendid treatise on Manual Training and how to introduce it into Public Schools.

WHY MANUAL TRAINING IS NEEDED.

AIMS OF MANUAL TRAINING.

HOW TO INTRODUCE IT.

WHO SHOULD BE THE TEACHER.

MATERIALS AND COST OF MANUAL TRAINING.

OUTLINE OF MANUAL TRAINING WORK.

EQUIPMENT FOR MANUAL TRAINING.

BOOKS HELPFUL TO TEACHERS.

INTRODUCTION.

In 1874 the general assembly of Iowa passed a law having for its object the encouragement of manual or industrial education. Because of prevailing or erroneous ideals and the lack of funds to provide rooms and equipment, only a few schools have established manual training departments. While encouraging reports have come from these schools, and a general interest in the subject is felt, not as much has been undertaken and accomplished as the leaders in education wish.

There seems to be a more general awakening on the subject recently.

The National Educational Association has done much to increase the interest.

In the report of the committee of twelve on rural schools the broad statement is made, that nowhere on earth has a child such advantages for elementary education as on a good farm, where he is trained to love work and to put his brains to work. This excellent report contains so much that is of value touching industrial training, that I quote from it most cheerfully:

MANUAL TRAINING—ART.

“One central and invaluable thing gained on the farm is the necessity for and habit of work. All work on the farm should be honored in the school room by expanding and concentrating it. The school should send back the children to the farm filled with the dignity of labor.

“The work of the farm, in a broad sense, is manual training, but most farm boys get a coarse way of doing manual training. They do not learn to use their hands expertly as they should. On all farms there should be work shops for the mending of tools, construction of materials and apparatus for farm work, and in the country school there should also be a small manual training department in which pupils may be trained to use their hands skillfully in making things needed for the farm and the home.”

A manual training room in connection with each country school may to some appear ideal and very remote. The age requires trained men—better trained than ever before—and observation teaches that the theoretical and ideal of yesterday is the practical of today. So it is most likely to be in the future.

The report of the committee on American Industrial Education, made at New York in 1900, expresses what seems to be a growing sentiment.

"There are now in this country," the report states, "only the beginnings of systematic educational opportunities for young people to learn the theory and practice of particular employments for which they are fitted by nature and in which they long to become engaged. We have an excellent system of public and endowed schools in which are more or less well taught the elements of knowledge and in which a very considerable mental capacity is developed. After leaving these schools our boys *know* something, so far as knowledge can be gained from books and oral instruction, but they can *do* little or nothing. This mental, abstract, and memoriter education needs to be supplemented by a manual, industrial, industrial art, commercial, or engineering education if the boy is to become a doer, or a director. He then not only *knows* something but he can *do* something, and because he can do something he is worth something to society. However much a man *knows*, he is a drone in the hive if he cannot do something for the common good. It must be understood we are not asking for utilitarian education *in place* of a mind-informing and mind-developing education, but to supplement such cultural education as the boy or girl has been able to obtain. Neither do we care to insist upon young people availing themselves of this utilitarian education. We are only concerned that it should be offered, and we have every reason to believe that it will be a long time before the facilities will outrun the pressing demand for any kind of education which will enable a man to rise, in honor and in usefulness, in his chosen calling."

The Iowa State Teachers' Association at its annual session in December, 1902, took a strong position in favor of the introduction of manual training. It adopted a report from the educational council, in which the following language is used:

"Manual training should be introduced into the public schools of Iowa. It should consist of free-hand and mechanical drawing, cutting, weaving and folding of paper and straw; basketry and clay modeling; work in card-

board, wood and metals; designing, bench-work, sewing, cooking, care for domestic animals and gardening. This will teach the child self-reliance, honesty, accuracy, perseverance, invest dull subjects with new life, giving an idea of real values; develop a wholesome respect for labor and laboring classes; keep the boys longer in school; train the mind to think, the eyes to see, the hand to do; furnish profitable employment for idle moments and prevent arrested development; make school a part of life, not simply a preparation for life. It gives systematic training to the child's motor activities whereby he gains complete command of his powers."

If manual training will even aid in a small way to "develop wholesome respect for labor and the laboring classes," and assist in overcoming the prejudice which exists on the part of some against those who labor with their hands, its introduction should be encouraged.

Though the general teaching body is in favor of needed changes being made in courses of study, and of the introduction of more of the industrial features in school work, the introduction of manual training may not be rapid. Two things appear to be necessary before great changes may be very generally made. First the people must be led to understand that proposed changes are for the benefit of the children, and second, provision must be made whereby it will become possible to obtain teachers prepared to give the required instruction. As stated elsewhere manual training has been incorporated in the courses of study in a number of normal schools. It is to these schools in large part that we must, I think, look for the greatest assistance. Boards of directors and those governing and managing normal schools must work in unity. The people are not likely to undertake the introduction of manual training without some assurance that teachers qualified to give instruction may be had, while on the other hand a course in manual training is not likely to be added to the normal school course unless it is reasonably certain that teachers will be needed to instruct in manual training in public schools.

In Wisconsin where for several years an effort has been made to introduce manual training, and a good beginning is reported, manual training department have been established in connection with several normal schools and fair sized classes organized. The state superintendent reports: "In several of the normal schools work in manual training and domestic economy has been incorporated in the courses of study for the grades below the normal department," and that rapid progress is being made in the working out of satisfactory courses in both subjects.

Classes might also be organized and instructed in manual training at the state college of agriculture and mechanic arts. Even by utilizing both the normal school and the state college, there will not soon be a sufficient number of teachers prepared to give the instruction desired in industrial lines.

To interest more of the friends of our school system in manual education is our purpose.

A careful reading of the accompanying pages will, I think, show that nearly every question likely to arise has been anticipated and answered.

The department of public instruction acknowledges its very deepest indebtedness to Mr. A. C. Newell, Supervisor of Manual Training, West Des Moines, for most valuable services rendered in the preparation of this chapter.

MANUAL TRAINING AND HOW TO INTRODUCE IT INTO THE PUBLIC SCHOOLS.

Manual training has sometimes been condemned on the ground that expensive buildings and costly equipments are necessary in order that it may be introduced and maintained successfully in the public schools. Elaborate equipments of machinery, benches and tools, costing thousands of dollars are of great help in strictly technical education, but much good work can be done in manual training without them. Fine clothes sometimes help a man to make a good impression upon the world; but they are costly, and do not always materially increase the efficiency of his labor. The size of the library in a school bears about the same relation to the efficiency of the work done by the pupils as the size of the manual training equipment does. The amount that a child learns in school does not increase in a direct proportion as the number of books in the library increases. A pupil can get a pretty good education from a few books well chosen and well studied. So it may be said that the amount of good that a child can get from manual training does not increase in the same proportion as the cost of the equipment increases. The boy or girl will obtain benefit from a modest equipment in manual training in the same proportion as he does from a few books in a library. The value of a fine library is not underestimated, nor are the advantages of a com-

plete, all-round manual training equipment; both are desirable and should be obtained if possible. It would be unwise if a school should be closed because it did not have a large, splendid library; so it is a mistake to have no manual training because a costly equipment cannot be obtained. The ideal type of manual training of the present day is not an expensive patent medicine cure for all the evils and diseases to which the present school system is heir. It is, however, a subject of much value, and its introduction will improve almost any school system of the present day.

WHY MANUAL TRAINING IS NEEDED.

Education has been defined as the training that cultivates the powers and forms the character. Manual training is an educational form of hand-work in which the pupils are taught to see, to reason, and to execute. The tendency of some of our modern education has been to draw the thoughts away from daily life, that is toward the theoretical. A close study of social conditions of today leads to the opinion that education should be closely connected with and prepare for every day life. After years of experience, it has been found that the child needs a training of the motor powers, and that this training enabling the eye, hand, and brain to work together, is educative, just the same as the study of history and the development of the memory cultivate the powers and help form the character. The kindergarten was originated and put into the schools to train the motor powers. Recently the colleges have complained that young people are poorly prepared to receive the greatest benefits of laboratory methods of study.

The changes in the industrial condition of the civilized world during the past thirty or forty years have made it necessary for the schools to furnish industrial training for the pupils, because the homes no longer furnish it. Formerly, each family largely supplied its own wants, and was almost independent of other people. The different members were active. One or more could weave cloth, rugs, carpet, etc., others could make shoes, most of them could help in constructing the simple household furniture, or assist in carpentry work in erecting a house, barn or shed. In fact, our forefathers could make most of the articles used about the home or worn on the person. Today all this is changed.

These things are now made in great factories where each person learns to do one kind of work. "No admittance" is written over the doors of these great establishments, and the children of to-day do not know how articles are made, nor do they appreciate their value. If all of a child's playthings are given to him, he frequently becomes destructive and does not appreciate them properly. On the other hand, if he spends considerable time making some article that he wants, he realizes its value and takes care of it accordingly. After a child has found out how much time it takes to construct an object, his idea of the worth of any article is increased and he becomes less destructive.

AIMS OF MANUAL TRAINING.

In manual training schools no attempt is made to teach a complete trade, as the aim of the work is educational rather than utilitarian. The pupils give only one-fourth, or at most one-third, of their time to manual work, and it is practically impossible to teach a complete trade in so short a time. It would not be of very great value for a child to learn all the details of a particular trade unless he wished to follow that line of work later in life. In some cities there are people working at about two hundred different trades. It is not practicable nor possible to teach all these different kinds of work. In some of the large cities there are trade schools doing splendid work on a different plan, giving most of the time to the particular trade that the child wishes to learn. However, in the manual training school, parts of several trades are taught and important information is given that will help a child to choose a trade later if he wishes. Manual training is taught as a part of general education and is not intended as technical education. Pupils in manual training are taught how to use tools, and given the underlying principles that are the foundation of all trades. They learn the proper use of carpenters' tools, turning tools, etc., in making useful articles that will be of value to them in their play or in the home. Sometimes quite good pieces of furniture are made. Young people of the age that attend our manual training schools are more benefited from this class of work than they would be from the technical study of stair building, roof trusses, or the construction of buildings.

The aims of manual training are many. Some of them, briefly stated, are: To create a love for labor and a respect for rough work with the hands; to develop independence and self

reliance; to produce habits of exactness, order and neatness; to cultivate dexterity of the hand; to train the eye to a sense of form, and to give to the growing child physical exercise and turn his mind to thoughts of useful things which will help him later in life.

Nearly all children love activity, and cannot, and ought not to study all of the time. A child's physical nature requires a certain amount of exercise; and if his activity is turned to something that is useful and enjoyable, we have accomplished a real good in the world. Children love games, and prefer the kind which gives them activity of *both* mind and body, to those which are entirely intellectual or purely physical. This is true more particularly of boys. Football, baseball, tennis, basket ball and other games in which the mind and body must *both* be alert are certainly more popular among children of school age, than purely intellectual games, such as checkers, cards, dominoes, etc., or even contests that are almost entirely physical in their nature such as foot races and some kinds of gymnastics. Manual training to a certain extent takes the place of games which appeal to both the intellectual and physical sides of a child's nature.

BENEFITS OR RESULTS OF MANUAL TRAINING.

In the well ordered manual training room we find that the children are much interested and have a love for and a delight in their work. There are few school studies which so interest a boy that he is anxious to do more than is expected or required of him. At certain times each week in Des Moines the pupils are permitted to come back to the buildings for extra work. In spite of other duties and outside attractions a very large per cent of the entire number of pupils taking manual training avail themselves of this privilege. Many of them stay and work as long as the teacher remains, and leave reluctantly.

Manual training usually creates and always intensifies a love for work with the hands. Many boys who are called lazy because they will do nothing about the house will work with a will for some one else if they are earning money. Nearly all such boys will willingly use the tools in the manual training room and soon get over their idle habits and distaste for work. Manual training pupils leave school with the idea that it is just as honorable (and more profitable) to work with the hands at two dollars a day, as to clerk in a store at three dollars a week.

Many pupils who do poor work in their other studies do well in woodwork and mechanical drawing. This success wins the respect of their fellow pupils and frequently encourages the backward youth to do better in other lines of work. If a slow boy suddenly finds out that he can do this work better than his fellow pupils, he will make a great effort to excel, and it seems to give him a new lease on life. He finds that he *is* good for something and this gives him a self-respect and a desire that he has never had before to go to work in earnest.

Manual training helps the pupils in other studies to a considerable extent. The training which the boys and girls receive in the shop and draughting room enables them to comprehend more thoroughly and quickly many of the difficult problems of mathematics and science. Hands familiar with tools can handle scientific apparatus to greater advantage, and this independence and self-reliance obtained in the manual training room bring better results and cause the person to accomplish more work.

Some portions of arithmetic are taught in the manual training department in a very practical way. A course in mechanical drawing is certainly of great advantage to students of geometry, for it enables them to understand the figures and to obtain a better comprehension of the subject.

Although manual training is taught as a part of *general education*, it frequently aids the young man or woman materially in selecting an occupation after school life is over. Most of the manual training boys do not become artisans after leaving school. The graduates very frequently obtain positions which require knowledge of several different kinds of work, and the all-round training which they have had seems to give them a versatility which enables them to adapt themselves to circumstances very successfully. Manual training is almost as valuable to the professional man as to the artisan. It will make the surgeon's fingers more skillful, help the dentist in his mechanical operations, give the lawyer a clearer idea of the value of industrial work, and cause the minister to more fully understand the joys, tasks and tribulations of the artisan class.

Another great benefit that is frequently noticed, is that manual training is the one thing that keeps some boys in school longer than they would otherwise stay. Pupils are not permitted to take manual training alone, so they are taught other subjects and obtain something of an education in other lines.

Many people have noticed that manual training has a good moral influence over a child. The pupils are *constantly* taught that their models and drawings have little value in the teacher's eyes unless they are true to size and form, and without defects. Perfection of work is the ideal that is constantly kept before them, and any attempt to cheat or pass in poor work is frowned upon. In a short time the pupil himself has a high ideal of what his own work ought to be, and he desires to make every model and drawing just as well as he possibly can. He learns to see in the concrete, and judge the vast difference between good and bad, between right and wrong, and this gives him the foundation for honesty in thought and in act. The moral effect of industry is very marked. Many bad boys have soon become interested in manual training work, and have thus been kept from bad thoughts and out of mischief by having both hands and brain busy in the workshop. The present method of reforming criminals is to keep mind and body busy with work. Work that a bad boy enjoys will surely benefit him morally.

HOW TO INTRODUCE MANUAL TRAINING.

There are four things that are necessary in order to introduce manual training into the school system. By the expenditure of more or less money each of the obstacles can be made to disappear. Our purpose is to show that some of the difficulties that prevent the introduction of manual training are not so impossible to overcome as is sometimes supposed. The city school board and superintendent usually proceed as follows:

1. To secure or arrange a suitable room;
2. To obtain a competent teacher;
3. To buy the necessary equipment;
4. To provide material with which to work.

KIND OF ROOM THAT IS NECESSARY.

Any school room that is well lighted will do fairly well for this work. The size will of course depend upon the number of persons who are to work there at one time. A teacher can give instruction to a class of twenty quite satisfactorily. There are many kinds of work that are being taught under the name of manual training, but the sort that is best known, and the one that is frequently introduced first, is bench work in wood, also called wood joinery and sloyd. If a class of twenty are to work in the room, each having a bench of his own, the room should be

about twenty-seven by thirty-one feet, or at least have a floor space about equal to that suggested. A slightly smaller room can be used but not to so good advantage. If a room of approximately the size named, that is with 837 square feet floor space, cannot be secured, the number of pupils working at one time should be reduced, also the number of benches and the amount of equipment.

Most of the work in manual training below the sixth or seventh grades can be done in the ordinary school rooms.

WHO SHOULD BE THE TEACHER?

The degree of success enjoyed by any manual training department depends largely upon the teacher, the dynamo of inspiration and enthusiasm, who should keep himself so connected with the pupils that ideals can be created and activities stimulated, and all their motor powers made to perform work efficiently whenever enthused by his energizing spirit. We could not expect the greatest efficiency from a poorly constructed dynamo; neither can we obtain the best results from a poorly prepared teacher. Experience has shown that the expert artisan is not the person to put at the head of a manual training department. Professor James W. Robertson, of Ottawa, Canada, who has charge of a large number of manual training schools, which were established out of a fund given for that purpose by Sir Wm. C. Macdonald, in speaking of teachers says: "It is no use to put an artisan, be he ever so clever a workman, into the manual training room and tell him to carry on the work. The artisan may be ever so clever and well-intentioned, but his forte is in handling *material* and in making the best use of that. The teacher's forte is in handling *children* and making the most of them which is quite another thing." The manual training room *should not* be a shop in which the sole idea is to make articles of commercial value for the market. In the manual training school the teacher should so plan the methods of making the models that the *pupils* themselves will obtain the greatest benefit possible. The *teacher* will think of the *training* that the boy or girl will receive by making the object, rather than of the model itself, which if possible should be a useful thing which the child can use about the house or elsewhere. The *artisan* will think of the *object*, and plan to make it by commercial methods, which of course demand that it be made in the quickest possible manner, also giving special attention to its appearance when done. One

of the arguments for having manual training in the schools, is that a boy can *not* get in a shop the all-round training that he needs. If we put an artisan into the school room as teacher a large amount of the benefit obtained from manual training is lost. The articles made by the pupils under the *artisan* teacher will usually appear better than those made under the instruction of a trained manual training teacher. This should not worry any school superintendent or principal, because the artisan will allow the pupils to use the mitre-box, trimmers and many other mechanical helps, which the trained teacher will object to on the ground that greater skill of hand and much more mental power can be obtained by other methods. A good education, a training as a teacher, skill of hand and a knowledge of many kinds of mechanical work, are all required as preparation for manual training teachers. The best teachers that can be obtained at a moderate salary are those who have taken special courses intended to prepare teachers of manual training in the normal schools or universities. At the present time several of the normal schools and universities of the state offer courses in construction work and other manual training for the primary grades, but no college in the state, at this time, makes any attempt to prepare teachers for grammar grade or high school work. Iowa will have to draw most of her manual training teachers at rather high salaries from the universities and normal schools of the neighboring states till our own schools introduce this work.

MANUAL TRAINING SCHOOLS FOR TEACHERS.

A few of the schools that prepare manual training teachers or are expecting to do so very soon are given below:

University of Missouri, Columbia. Also summer courses.

University of Minnesota, Minneapolis.

State Normal School of Wisconsin at Oshkosh.

University of Illinois, Champaign. Summer courses.

School of Education, Chicago. Primary work.

Chicago Normal School, Chicago.

State Normal School, Greeley, Colo.

State Normal School, Mankato, Minn.

State Normal School, Moorhead, Minn.

State Normal, Platteville, Wis.

Drake University, Des Moines. Primary work.

Highland Park College, Des Moines. Primary work.

Chicago Sloyd School. (Anna Murray, director.), 147 Fifth Ave., Chicago.

Bay View, Mich., Summer University, Sloyd Department. Summer courses only.

State Normal of Iowa, Cedar Falls, Primary work.

Teachers College, New York City. Summer courses also.

State Agricultural College, Ames.

University of Wisconsin, Madison.

University of Michigan, Ann Arbor.

University of Illinois, Champaign, etc.

All of the Engineering schools give courses helpful to high school and grammar grade teachers of manual training.

In introducing manual training into the larger cities of Iowa a properly trained specialist should be secured to take charge of the work and give his entire time to it. In the smaller cities a teacher must be secured who can teach some form of manual training and also one or more other lines of work. As soon as our normal schools furnish construction work for the primary grades, and bench work in wood for the grammar grades and high schools, then the smaller towns and cities will be able to find some one who can carry on this work successfully even though he may not be a trained manual training specialist. Many of the normal schools and universities have already begun to prepare teachers for this work and others will soon follow. The day is not far distant (judging from recent reports from several schools) when many such teachers will be educated; and then the problem of manual training for the schools of the smaller towns will be solved; for the expense of equipment need not be very great if the school is small.

MATERIALS USED AND COST OF MANUAL TRAINING.

The kind of work that is attempted of course determines the sort of materials that are to be used, and also to a certain extent the cost of manual training. The best, the most profitable, and the cheapest form of manual training that can be introduced into the grammar grades and high schools is without doubt woodwork of some kind. Metal work of different kinds is taught in many of the well equipped manual training schools of the larger cities. The equipments for metal work are in general rather expensive; and, as woodwork is more suitable for school use, (especially for boys and girls who live in the smaller towns and

cities) nothing will be written about the more expensive forms of manual training.

Some form of handwork can be introduced profitably into every grade. Sewing, weaving, clay modeling, paper folding and cutting, card board work, raffia braiding, and even simple forms of basketry, are all suitable for the primary grades. If carefully managed, the cost of this work will not be more than a few cents a year for each pupil. The fifth and sixth grades delight in making baskets of raffia and rattan or rope. Venetian iron work, and knife work in thin wood are also excellent for these grades. The pupils will in most cases be willing to pay for much of the material used if they are allowed to take home the objects they have made. A little money can sometimes be made out of basketry. The thin wood work can be done at the seats of an ordinary room, but some sort of a board or desk cover should be used to protect the seat top. A whittling outfit for twenty pupils can be obtained for from ten to twenty dollars. (See catalogues of Chandler & Barber, Boston; Orr & Lockett, Chicago; Hammacher, Schlemmer & Co., New York; and other dealers.) Materials for primary grades can be obtained of Thomas Charles Company, 195 Wabash Ave., Chicago; also of Home & School Art Co., 706 Fine Arts Building, Chicago; and other dealers.

Bench work in wood is usually introduced into the seventh or eighth grade. In West Des Moines the average seventh grade pupil makes six or seven models the first year, the classes meeting once a week for an hour. The exact cost of the wood in the first six models is twelve cents. A certain amount is wasted which will probably bring the cost up to twenty-five cents per pupil per year. The second year the wood in the models costs twenty-three cents, and the waste will increase it to about thirty-five cents each.

COST OF WOODWORK IN THE HIGH SCHOOL.

Many of the best high schools have their courses arranged so that their pupils spend two periods each day in the manual training department, one-half the time in the mechanical drawing-room and the remainder in the workshop. The cost of a course in bench work in wood depends upon the number and size of the models, and the kind of wood that is used. If small models, requiring much work on each piece are given, the cost of the course is less. In West Des Moines the pupils work forty-five

minutes each day, and the cost of the wood in the models that they construct in a year is about one dollar and twenty-five cents for each person. There is a waste of possibly forty or fifty cents a pupil, bringing the cost to about one dollar and seventy-five cents. Each person pays for all of the larger articles which he takes home, so this materially reduces the expense.

The wood in the models in the course in wood carving (three months, one period daily) costs about forty cents, with not more than ten cents waste. This total of fifty cents is reduced materially as the pupils usually pay for most of the articles they make, and take them home. The pupils pay for the *wood* in the articles, nothing more. The cost of the wood used in the course of wood turning per pupil is about one dollar, the wood in the articles made costing sixty cents. A considerable portion of the sixty cents is returned when the pupils take away their much-valued work. The course in pattern making costs about the same as the course in wood turning.

At least five per cent on the cost of the equipment must usually be expended each year to keep up repairs and to replace tools worn out, lost or stolen, etc.

The cost of manual training in different cities varies a great deal. Wood in Iowa is rather expensive compared with the cost in some other states.

OUTLINE OF MANUAL TRAINING WORK.

An outline of work may offer some suggestions of value to school officials who are contemplating the introduction of manual training into the schools under their supervision. The following is the outline of manual training work for the grades and high school as taught in West Des Moines, Iowa:

FIRST GRADE.

Clay modeling.
Paper folding and cutting.
Weaving with yarn, etc.
Sewing.

THIRD GRADE.

Card board work.
Sewing.

SECOND GRADE.

Clay modeling.
Paper folding and cutting.
Weaving on looms.
Sewing.

FOURTH GRADE.

Card board work.
Sewing. (To be introduced soon.)

FIFTH GRADE.

Basket and mat weaving using
raffia, rattan and rope.
Venetian iron work

SIXTH GRADE.

Mechanical drawing.
Basketry.
Venetian iron work. (Thin wood
work at seats. Not yet intro-
duced to any extent.)

SEVENTH GRADE.

Bench work or sloyd in shop.
Mechanical drawing.
Basketry and braided raffia
work.

EIGHTH GRADE.

Bench work in wood continued.
Mechanical drawing continued.
Basketry especially for girls.

The amount of time spent by the grade pupils is from one to two hours a week. It is expected that sewing will be introduced into all of the grades at no distant day.

The following are the names of some of the articles made by the seventh and eighth grade woodwork classes:

Two practice exercises, flower stick, planter, tool rack, bread board, flower pot cross, flower pot stand, coat hanger, hat rack hammer handle, towel roller, hatchet handle, nail box, match box, salad fork, pen tray, salad spoon, clock shelf, book rack, sugar scoop and meat pounder or mallet.

In two years the average pupil makes from twelve to sixteen of these articles, working one hour a week. The models are made in the order named, and a fast workman sometimes makes the whole set and even more in two years time.

OUTLINE OF HIGH SCHOOL WORK.

FIRST YEAR.

Mechanical drawing, forty-five minutes per day. This course consists of the use of instruments in making simple geometric and working drawings; the study of the orthographic projection, and practice in making drawings showing the intersection of solids and the development of the surfaces of objects. The pupils are taught to make simple letters and figures, and a title plate in which several styles of letters are used is also required.

Wood joinery, forty-five minutes per day. The chief object of this course is to teach the correct use of the tools that are commonly used in carpentry and joinery. The first part of the work

consists of a number of exercises which are given simply for practice so that the pupils may obtain some skill in the use of the try square, gauge, bit, saw and chisel. The method of using a plane is then explained, and the students are required to make a number of joints. The latter part of the course consists of making a number of constructed articles. These objects are made of several parts, and are all useful articles which can be used about a home.

The names of some of the articles made in this course follow:

Ping-pong rackets, coat hanger, towel hanger, lamp bracket, nail box, bench hook, picture frame, book rack, bench drawer, handkerchief box, dove-tailed glove box, brush broom holder, photograph box, carpenter's mallet, wall pocket, necktie box, tabouret, and sometimes other useful articles. All of the above articles are not required. Certain models *must* be made, and the pupil is allowed to select some others that he prefers from those remaining.

SECOND YEAR.

Mechanical drawing, forty-five minutes per day. This course includes the drawing of screws, bolts, nuts, etc., sketching of machines, machine detailing, sectioning and tracing to occupy most of the time. A brief study is also made of shades, shadows, isometric and oblique projection; and water colors are used in tinting a few of the drawings.

Wood carving, forty-five minutes per day during first three months; use of veiner and parting tool in making straight and curved lines, outline carving, chip carving, relief carving.

Wood turning, forty-five minutes per day for six months (follows carving). The work consists of: center turning and the correct use of the common turning tools; inside and outside turning on the face plates, and making spheres, goblets, towel rings, napkin rings, plates, boxes, etc.; constructing articles from designs, as stools and stands; the use of wood filler, oil, stain, shellac and varnish in finishing and polishing wood; inlaying on the face plate; exercises in gluing and turning of glued pieces, and the study of the strength and uses of different kinds of wood.

THIRD YEAR.

Mechanical drawing, forty-five minutes per day. The time in the third year is given to the study of perspective. Objects are drawn in parallel and oblique perspective, and later in the

course comes the study of shades, shadows and the intersection of surfaces. Some time in the latter part of the year is given to architectural perspective and the use of water colors.

Pattern making, forty-five minutes per day. Part of the time at the beginning of this course has been given to cabinet work. Later the principles of pattern making are taught and a number of patterns are constructed. Castings have been made from some of the patterns at one of the city foundries.

A fourth year in drawing, and a course in machine work in metal will probably be introduced before long.

Courses in cooking are being carried on very successfully in the upper grammar grades and high schools of many cities.

EQUIPMENT FOR MANUAL TRAINING.

Many specialists have given the problem of equipment much thought during the past few years. The kind of an equipment that should be secured depends upon many factors, such as the kind of work desired, the size of the classes that are to work at one time, the total number of pupils to use the outfit, the amount of money available, etc. No attempt to treat this subject exhaustively will be made in this article, but a few suggestions will be given, and accurate lists of the tools required for certain kinds of work will be furnished.



W. C. TOLES CO., CHICAGO.

Different schools have slightly different equipments for bench work in wood. This is somewhat due to the fact that the models or articles made are not uniform in all schools. One set of models requires a slightly different set of tools from that which would be necessary in making another set of objects. All schools use about the same kinds of tools, but the number of each kind varies considerably. Orr & Lockett, of Chicago, Chandler & Barber, of Boston, Hammacher, Schlemmer & Co., of New York, and probably other firms have good lists of tools made out by experienced teachers. A close study of such a list is valuable to a person who is planning to purchase a manual training outfit.

It is very difficult to recommend any particular bench as being the proper one to purchase. If the bench is to be used for Grammar grade work and does not have very hard usage, one of the cheaper ones costing from six to nine dollars apiece will answer the purpose nicely. The following are benches of this class with ordinary retail price which is usually somewhat discounted by some firms if a number are purchased at one time:

Style L. Bench (Hammacher, Schlemmer Co., N. Y.)	Price.....\$ 8.00
Youth's Bench (Grand Rapids Mich. Hand Screw Co.)	Price..... 8.00
Single Bench (Orr & Lockett, Chicago)	 7.00
Bench No. 1 (The Artisans Guild, Muskegon, Mich.)	 9.00
Bench No. 10 (Chandler & Barber, Boston)	 10.00



GRAND RAPIDS HAND SCREW CO.

A better grade of benches with improved vises, etc., can be obtained from most of the above companies; also from:

W. C. Toles & Co., Irving Park, Chicago, Price.....\$15.00
E. H. Sheldon & Co., Evanston, Illinois, Price.....\$10.00 to 15.00

A few lists of tools and the approximate prices at which they can be purchased may be of interest in connection with this report. The list for the seventh and eighth grades is quite complete and is practically like the equipments that have been used in five of the grade buildings in West Des Moines for several years. The lists may be cut down slightly if absolutely necessary.

CONCLUSION.

The outlook for manual training in Iowa is encouraging. Several of the larger cities have had good courses in manual training for some years. The first of the smaller places to introduce manual training is Ackley. Supt. Paul F. Voelker writes that their equipment cost about \$250, and that the work in Ackley has been very satisfactory to all concerned. He also stated in a recent letter that the expense of materials had not been at all large so far. The teacher of manual training is Mr. G. E. Wallace, a graduate of the Iowa State Normal. Mr. Wallace obtained his preparation in the manual training line in the summer sessions of the University of Wisconsin. He teaches manual training three hours a day, and other subjects during the remainder of the time.

The outline of work herein given may not be exactly what is wanted in other places, and is probably far from ideal. If the suggestions given and the information furnished prove helpful, and tend to encourage the introduction of manual training into the public schools, an end much desired will have been achieved.

SOME PHASES OF THE LABOR QUESTION.

The following valuable paper was delivered at the National Convention of Employers and Employees at Minneapolis, in September, 1902, by Colonel James Kilbourne, of the Kilbourne Jacobs Manufacturing Co., Dayton, Ohio, and is reproduced here on account of the many valuable and practical methods described by him and that are actually in successful operation in their plant, and are the results of thirty consecutive years' experience by a company that is the largest manufacturing establishment of its kind in the world.

The invitation to address this conference was given me, I understand, because for nearly thirty years, I have been the manager of a company between which and its employees no disagreement of any kind has ever arisen.

It was thought, I am told, that a statement of the methods employed by our company might explain the cause of such a long unbroken industrial peace, and be of some help in the solution of the problem before us.

Standing here tonight recollections of many incidents come before me, which doubtless bear upon the happy relations between the company and its workingmen, but to relate these would savor too much of personalities for an occasion like this. I shall confine myself, therefore, to describing briefly the general course of conduct towards our employees, which was adopted by the company at the beginning, and has been, sometimes not without difficulty, pursued until this time; and to a statement of what, in my opinion, labor may justly demand from those who employ it.

From my association with my own employees, I have come to know something of the feelings of workingmen generally, something of their hardships and privations, something of their hopes and fears. I know the justice of their demand for much that is still denied them, and welcome every fit opportunity to say and do what I can in their behalf.

If I shall seem, in what I may say, to speak as if ex cathedra, it is not because I feel competent to do so, but because I wish to give my opinions frankly and definitely, and being obliged to be brief, may appear to assume an authority I am very far from feeling.

Personally, I should prefer to confine my remarks to a general discussion of the labor question, and shall speak of our own company only because it has been suggested that our experience may be of value to others.

Its policy in general terms is to accord the same treatment in every respect to those employed by it at daily wages, that is shown to its officers and salaried clerks.

This applies to vacations, to advancement in wages for merit and length of services, to allowance for illness or injuries, and to all relations

between us. The coal shoveler feels as much at liberty to call upon the president of the company, either at this office or his home, about either the company's or his own affairs, as does the superintendent, and is assured of as much consideration as would be shown anyone.

Employees are paid always in cash and from the day the company began business, no man's wages have ever been reduced. During the last panic, when, as is well known, wages were generally largely reduced, in some cases thirty and even forty per cent, we maintained the old rate, but at the cost of a considerable part of our accumulated surplus. Wages of individuals are advanced from time to time in accordance with their increased efficiency, and we have several times voluntarily increased all wages in keeping with the general advances—this year more than usual, in view of the increased cost of living.

If an employee is injured or seriously sick, he is allowed half or full pay, according to circumstances, without reference to whether the injury was through his own negligence or ours. If injured seriously, he is sent to a hospital, not placed in the general or free ward, but in a private room, under a paid physician, with instructions to give him every care that would be given to an officer of the company. In several instances old employees, unable to bear the expense themselves, who have developed symptoms of pulmonary disease, have been sent to North Carolina or Colorado, at the company's expense. Such a course may seem economically unsound, but we have never had cause to regret it, and I do not believe that we have ever been imposed upon.

We employ between five and six hundred men, and accidents, many of them serious, requiring surgical or medical attention, will average nearly one a day, yet in all these years, we have never had a suit for damages, or any demand for compensation for injury.

Many years ago, when sixty hours a week was the regular time of work, we gave the men Saturday afternoon holidays without loss of pay, during the months of July, August and September, so that their vacation might equal that of the officers and clerks.

We do not work Saturday afternoons at all now, except under very urgent circumstances, but for the Saturday afternoons in July, August and September, we continue to give full pay, as before. We also have annual picnics, which are attended by the officers and their families—a custom which, I am glad to say, has come to be followed by nearly every manufacturing company in our city.

Strict instructions are given that no man shall be discharged without just cause, and that, except for gross misconduct, no one should be discharged, without at least a week's notice—longer if his circumstances are poor—so that he may have an opportunity of securing other employment immediately upon terminating his connection with us. Nearly ninety per cent of the men now living, who were with us twenty years ago, are with us today.

In the employment of men no difference is made on account of color, religion or politics, and no one is ever asked whether he is or is not a member of a union. Many of our employees are union men, but the greater number are not, between these there has never been any evidence of unpleasant feeling. There is but one union—the blacksmiths—formally recognized in our shops—comprising less than one-tenth of our employees. Our agreement with them is that in case of any disagreements which cannot be settled satisfactorily between us, the question at issue shall be referred to an arbitration committee, consisting of one member, to be selected by the employees from their number, one to be selected by the management, the third member to be the Governor of the state, if he will serve; but no differences have ever arisen to be arbitrated, or even to lead to consultation between us.

Now a few words as to the feeling exhibited towards us by our employees. I could relate innumerable instances, showing their loyalty and devotion to our interests, but one will, I think, suffice—the like of which

I have never heard of before or since. Some weeks after the beginning of the great panic in 1893, when trouble and desolation was spreading over the land, there filed into my office at our shops one morning, some fifteen or twenty men, representing the different shops of our works. They bore serious countenances and a serious manner, and my heart sank within me. One of my most earnest hopes had been that there should never be any trouble between our employes and myself, and I thought, "Here it has come at last."

Finally one of the men arose, and said: Mr. Kilbourne, we have hesitated about coming here, we have thought about it a great deal, and believe we are right, and we hope you will receive the suggestion we have to make in the spirit in which it is offered. We have seen in the daily papers accounts of the failure of this firm and that firm and the other firm, which has existed for many years, and were thought to be strong enough to resist any panic. We know that your warehouses are filling up with goods. We know that, as is the case with other manufacturers, you cannot sell the goods you are making today, and cannot get your pay for the goods you have sold. We do not know what your circumstances are, but we fear they may be like those of other men who have failed. Some of us have been here a few years; some of us many years; some of us almost a generation. We have had good pay, we have been able to save up some money, and while the individual savings are not very large, the aggregate is a very considerable sum. We have come to tell you that it is all yours, to do with what you please, if you need it in the interests of your company."

Oh, my friends, I leave it to you to try to think what my feelings were upon that occasion, because I have never, from that time to this, been able to find words which could properly express them.

And now let me pass to the consideration of those things which labor seeks and which must be granted before we can have industrial peace.

LABOR'S SHARE.

It is evident that wage earners *as a class*, are not getting their full share of the profits produced jointly by labor and capital. The wonderful accumulation of wealth by the few, the frequent labor agitations, the number and proportions of labor strikes all demonstrate this.

There are, of course, exceptions, but, generally speaking, labor does not receive its full share. While it is true that the standard of living among working people has greatly improved during the present century, it is, considering the vast increase in wealth, and change in general conditions during that time, still far from what it should be.

I never visit the home of a common laboring man, but I am impressed with how few of the comforts—not to speak of the refinements—of life are possible for him, and his patience is a constant marvel. To many of them—"Life is a tragedy too deep for tears." Improving public opinion—a growing conviction that we are our brothers keepers—is a strong force tending to better the situation of wage earners, but while instances multiply where just and kindly relations between employer and employed, prove by their results, the benefits of each of the mutual recognition of brotherhood, making in some instances, labor unions unessential; yet, in the majority of cases, these are still necessary to secure just wages and what is of still greater importance to American workmen, the acknowledgement of equal manhood.

The great discrepancy between the rewards of manual as compared with those of other labor, the fabulous fortunes made by speculation, and the forming of gigantic trusts, controlling the necessities of life, are breeding in this country the spirit of socialism.

I do not, however, believe with those who prophecy a social revolution near at hand. I do not believe a speedy overturning of our present social system, imperfect as it is, would be beneficial to any of our citi-

zens—least of all to working people. While the wage system is, I trust, only a station in the advance of labor from slavery to true independence, I do not believe it will be done away with in this generation, but I do believe that many of its hardships may be alleviated, and many of its inequalities largely corrected, and great steps forward to better things be taken in our time if organized labor does all it can and ought to do by working faithfully and unitedly to that end, and by being as strict in its observance of the rights of others as it is firm and determined in maintaining its own. I hope and believe that there will be established ultimately, a social system better than that we now have, but I am sure it will come, and will better come by evolution, not by revolution. Its exact form I would not venture to predict, but I do not believe it will be socialism; I think there is something much better in store for us; but whatever its form may be, if it is to be final, its methods will conform to the golden rule—justice will be its corner-stone and love for our fellowmen its firm foundation.

SOCIALISM.

The ultimate purpose of socialism is a commendable one; there is no more desirable object than the elevation of the mass of mankind. It seeks to accomplish this by making the state the only possessor of the means of labor. The state is to order what work is to be done and to divide the returns. My belief is that this would result not in greater freedom or in real equality, but in the most grievous tyranny, and that the equality secured would be ultimately that of general poverty, and that true progress would cease.

If the state is to have universal control, it must exercise an authority more absolute than any of which we have record. If such a tyranny is to guide our daily work, to determine its rewards, to order our incomings and our outgoings for the sake of equality, even that equality, poor as it would be, would not long exist.

It does not follow, however, that if the full program of the socialist cannot be safely pursued, that measures, called by some, socialistic, cannot be safely and profitably adopted.

It is altogether probable that, in the near future, public utilities—what are sometimes called natural monopolies, such as water-works, the lighting of towns and cities, telegraphs, telephones, and street railways—will come generally under municipal ownership or control; ultimately perhaps, railways and mines will be under the management of the state; but I do not believe that socialism, as strictly defined, will ever prevail in this country.

With free and enlightened people, having universal suffrage, there is a better way of securing relief from the evils which now exist. It is not necessary to surrender our individual freedom in order to secure equal rights. Bosses and trusts and all conspirators against the spirit of American equality, can be controlled by better means, and will be. Without revolution, without disorder, and acting strictly within the law, the American people will find a way to secure equal justice and equal rights to all. This meeting itself is an evidence of their rising determination to put an end to special privileges; to say to corporate greed—thus far shalt thou go, and no farther; to assert and to maintain the truth that this is the people's government, that it was founded by the people, and for the people, and that the man who toils, whether at the forge or in the field, in factory or in mine, is as much entitled to its protection and the share in its administration, as the greatest so-called captain of industry.

Public morals are improving, public opinion is becoming a factor which is stronger with each day that passes, and we may never expect to hear spoken again in this country, by the head of even the most powerful trust, those words so contemptuous of the people, "The public be damned."

Those who are called the 'common people' are going to take charge of this government, and in their hands, it will be eternally safe. "Educated or uneducated, they do not hold party above principle, and their distinctive honesty of purpose gives them a moral power, which will be as overwhelmingly great as is their number."

IMPROVED FACTORY REGULATIONS.

Common humanity demands that employers of labor should take every practical precaution against bodily hurt to their employees. While the number of those employers who do not recognize, or do not care for their responsibility for the well being of those under them is, under the advancing humanitarianism of the age, rapidly diminishing, the number of those careless of the safety of their employees, and who will remain so, unless compelled by the law to do otherwise, is very large.

Even if every manufacturer, every railroad president, and every mine owner, were alive to their duty in this respect, public supervision would still be desirable.

The just and humane employer welcomes the suggestions of the inspector for additional precaution against harm to his employees, and urges frequent inspections in order that he may be assured that every guard against injury is in place and in proper condition. Here I want to make a suggestion. The law should provide, not only for precautions against injury, but for some means for immediate care in case of accidents. What is known as "Fred's Pouch" should be in every shop in every caboose and freight house, and in every mine. This pouch was the suggestion of Fred Woodrow, of whom every intelligent workingman knows, or should know. Unselfishly devoted to his fellows, he has justly been styled the "Samaritan of Labor."

It has never been my good fortune to know him personally, but I have read much that he has written, and there is no man I more highly respect. For the suggestion of his "Pouch" I shall always feel personally indebted to him.

This is a pouch, in which is kept, open to all, linen and lint, arnica, sticking plaster, antiseptics, etc., with instructions for use.

Many a limb and many a life has been saved by the immediate use of these simple appliances, by which blood poisoning has been prevented.

One would think that every employer of labor would think of and provide them, but it never occurred to me to do so until one of our men, a fine specimen of physical manhood, lost the use of his arm, and came near losing his life. When I saw him on his bed, his arm black and swollen to the shoulder, and death threatening him; and recognized that if I had been as careful of his safety as of that of my own son, his suffering and danger might have been avoided, I felt almost as if the mark of Cain ought to be upon me.

So I welcome the visit of the inspector, and gladly avail myself of his better knowledge of what safe-guards are required, and with all humane men, I welcome everything which calls to our mind, and enforces the fact that men should be more to us than dollars.

EIGHT-HOUR WORKING DAY.

One thing which can and should be done to better the condition of workingmen, is to shorten the hours of labor. "Man does not live by bread alone," and workingmen should have greater opportunity for recreation, for sports and for reading and study.

It is their just due, and one which they have a right to demand from society. Shorter hours would lead to the shortening of the list of the unemployed, and assist in securing better wages.

Released from the effect of the constant pressure of large number of unemployed, forced at times to accept work at any price to escape starvation, workingmen could easily secure better terms.

The eight-hour day is possible with labor well organized under conservative leaders. Legislation can supplement and confirm what they accomplish, but cannot secure the end sought without their united and harmonious demand. This ought to be made, and I hope to live to see the time when eight hours will be the limit of a day's work for manual labor in this country.

I am aware of the objection which is made that the effect of such shortening of time is an enhancement of the cost of production which competition with those working longer hours would make fatal, but I am contemplating a reduction so wide-spread that this would not apply. If an eight-hour day is established in this country in any important trade, the same would be quickly established in England, and then, more slowly perhaps, in other competing countries. If one trade is thoroughly successful, the others would quickly follow.

Just men, whatever their position in life, will oppose child labor and excessive hours of work, not only for the reasons already given, but for the sake of a happy home, without which neither virtue nor religion thrive.

TRUSTS.

It is quite a common belief that the evil inherent in Trusts is not combination but over-capitalization. Combination, it is said, brings with it great advantages. It economizes in cost of production, prevents ruinous competition, and, therefore, compulsory lowering of wages, and secures firm prices to consumer and producer. The evil they say is that the trusts by over-capitalization put an excessive value on the properties combined, and that in undertaking to pay dividends and interest on the stocks and bonds, they seek to take the unearned interest out of either the wages of the laborers or the price paid by the consumer. This is undoubtedly one of the great evils, for the bonded debts of these corporations will be a perpetual burden on the public, but so far as workingmen are concerned, they would be in danger whether the trusts are over-capitalized or not, the over-capitalization, of course, aggravates the evil.

It is *monopoly* that gives the power to regulate wages, over-capitalization merely adds an additional incentive for lowering them.

If all manufacturers in a given line are combined, the workingmen in those industries have no free market for the only thing they have to sell—their labor.

The two assumptions upon which over-capitalization of industrial concerns are based, are that, through monopoly higher prices can be obtained from the consumer and labor be regulated at their will. This would permit the enforcement of the theory which public opinion in this country has long since condemned that one man has the right to buy the labor of another as he would merchandise at the lowest obtainable price; that wages must be regulated by the law of supply and demand, with no other restriction than supplying the means of bare existence.

I am not opposed to large corporations, where no monopoly results, and I can conceive of combinations that would be beneficial not only to the parties combining, but to their employees and the public at large. But the over capitalized trusts of today are practical monopolies. They are a menace to our prosperity and to the independence of laborers. It is becoming a very common belief that while both of the great political parties declare against them in their platforms, nothing will be done to crush them, or effectually control them, and it is held by growing numbers that the tendency towards their promotion is so universal that it must be grounded on economic and moral necessities.

If this is so, if the tendency to monopoly is irresistible, if it is following out the law of progress, and any attempt to resist it will be in vain, then there is but one thing for laboring men to do for their own protection; they must trust each other more and learn to work together more harmoniously. Public opinion is becoming more and more upon their side. The great majority of well-to-do people in this country are in

sympathy with them, and the enormous increase of monopolistic trusts will compel all fair-minded men to acknowledge the necessity for labor organizations.

LABOR UNIONS.

There are, it is true, still many well-meaning men who object strongly to trades unions. They think them troublesome, a check on production and a menace to social order.

That they are not always peaceable is true; that they are inimical to productive or social growth is not true, and for the laborer, they are often a necessity.

While there is an increasing number of employers who recognize their true obligations as such, and who are as sincerely concerned in the advancement of the interests of laboring men and women as they themselves are, and while there is a growing opinion in the world that the man who does not deal fairly with those he employs to aid him in building up his business, is a man to be shunned by his manlier brothers, organization of labor is still necessary in a multitude of cases to insure fair treatment and just wages. Enlightened public opinion is coming more and more to recognize the necessity for such organization, and to recognize the fact that "even if the gains from it were much less than they are, and the dangers greater than they are, it has the promise of better things."

With all the faults of administration which have in the past, and may in the future turn them for a time from the way of peace, their ultimate object leads not only to the improvement of workingmen, but to the advancement of mankind.

Where does self-denial and living for others, not for self alone; the recognition of the universal brotherhood of men, as the sons of one Father; the helping of the widow and orphan, the care of the sick and needy, find greater expression than in the unions and councils of labor?

The great development of these organizations in recent years; the willingness displayed by their members, not only to help and assist those in need, but to do so at the cost of great inconvenience, and even suffering to themselves, to make sacrifices sometimes for those they have never known and may never know is to me an evidence of advancing civilization, a step forward towards that time, desired by the good of all the ages, and yet, so far away, that hope alone pursues it, the time when all men shall know that living for others is the only true life; the only life worth living.

RELATIONS BETWEEN EMPLOYERS AND EMPLOYEES.

What are the true relations between Capital and Labor? What are the facts? The money of the capitalist and the labor of the workingman are both necessary to insure the results sought. Their true relation is that of "independent equals uniting their efforts to a given end, each with the power, within certain limits, to determine his own rights, but not to prescribe the rights of the other. The employer has no more right to dictate or even decide how labor shall seek its interest than labor has to dictate to the employer."

With this community of interest, this practical partnership recognized; with fair wages and just consideration of manhood and brotherhood, labor and capital can live and work harmoniously together, even under the wage system.

Nearly thirty years' experience, as a manufacturer has convinced me that workingmen do not ask, that they do not desire, of those in whose fairness they have confidence, more than they believe to be justly due them, and that when an employer wishes to do all that justice demands and necessity permits, and approaches them and deals with them as men having the same feelings, the same objects in life, and the same

rights as themselves—there will be no trouble whatever in establishing amicable relations between them.

When the officers and employees of our company march together on public occasions, they carry a banner, which has in its center, two clasped hands. Over these is the word "labor," and underneath, the word "capital." It represents, I truly believe, the feeling which exists between us, and I know no reason why it should not, if just effort be made by both, represent the relations of labor and capital everywhere. I believe, in spite of many evidences to the contrary, that we are steadily progressing towards that end, and I speak with the confidence born of conviction when I repeat the prophecy, "though trusts and monopolies may multiply, the cause of workmen struggling for a more just and equitable participation in the joint proceeds of capital and labor will not suffer." Neither combination of capital, the errors of its friends, nor the crimes of anarchists committed in its name can permanently check its onward progress.

Unwise and selfish legislation may, for a time, delay it, but ample peaceful remedy is in labor's hands. With organization seeking advancement in intelligence, in education, in patriotism, as well as in wages; with leaders unselfishly devoted to right and justice; with a free ballot and a fair count, it will, in the right way, the orderly way, the lawful, honored, American way, secure its just rewards.

THE IRREPRESSIBLE CONFLICT.

While between labor and capital, there may be and should be peace—between labor and monopoly, there can never be anything but war. The strike in the anthracite coal mines may be stopped for a time by the exhaustion of either party to it, but the strife will never be definitely settled while a few individuals, claiming divine authority, assert the right to control a necessity of life, the gift of the Creator to all his children, and to do with it as only they see fit.

It is said that behind the coal trust are arrayed other large monopolistic corporations—and that these hope for the success of the coal trust in the existing struggle, believing that if it is successful, unionism in this country will receive its death stroke. I do not believe it. This is a thing that will never be accomplished. It would be a most disastrous thing, as disastrous for capital as for labor. No, the onward march of labor may possibly be checked and delayed, but it cannot be permanently prevented. The overwhelming weight of public opinion is on its side, and will be so long as it wages its conflict in lawful ways. Let the laboring man remember that *Liberty under the form of Law* is his greatest earthly inheritance; of more importance to him than it is to the rich. Let him be careful, as careful of the rights of others, as he is of his own, and in the end he will surely be triumphant, helping the coming of that happy day, which may God speed; when lock-outs and strikes shall be no more, because, all men shall recognize and obey the obligations that pertain to the universal brotherhood of man.

DIRECTORY OF EMPLOYERS OF IOWA.

This business directory contains the names of employers and business houses in the state where three or more persons are employed, with the exception of Railroads, Hotels and Restaurants. It has been revised and corrected from lists of former years, with the addition of all new establishments in the state of which the Bureau has been able to obtain a record. It is hoped that this directory will prove of such value to the business interests of the state as to ensure prompt report to the Bureau the names of all new industries or mercantile establishments, as soon as they are located in the several sections of the State.

If this directory is incorrect in any particular, a favor will be conferred by promptly notifying the Bureau for future correction.

AGRICULTURAL IMPLEMENTS, MANUFACTURES.

Acme Farm Implement Co., Bussey.	Davidson, T. S., Hay Tools Mfg., Colesburg.
Butler Mfg. Co. End Gates and Tanks, Iowa Falls.	Daley, H. M., Farm Mfg. Machinery, Charles City.
Bowman & Boyer Co., Farm Implements, Keokuk.	Four Berry Row Corn Planter Mfg. Co., Iowa City.
Childres and Founted Plow Mfgs, Al-lerton.	Gregory & Son Bee Hive Mfg., Ot-tumwa.
Cedar Falls' Seed Cleaner Co., Cedar Falls.	Iowa Chief, Shovelling Board Mfg. Co. La Porte.
Caward, Russel S. Stump puller Mfg. Cresco.	Independence Level Tread Power Co., Independence.
Cresco Novelty and Plow Works, Cresco.	Iowa Farming Tool Co., Agricultural Imp't, Fort Madison.
Cresco Mfg. Co. Fanning Mills, Cresco.	J. E. Harvey, Farm Implements, Cen-terville.
Cherry, D. B. & Co., Feed and Litter Carrier Mfg., Knoxville.	Judlesch Implement Co., Holstein.
Cylinder Tooth Mfg. Co., Dexter.	Janney Implement Mfg. Co., Ottumwa.
Dain Mfg. Co., Rakes and Swings Farm Impl'ts, Ottumwa.	Ketchum & Johnson Mfgs., Farm Im-plements, Marshalltown.
Dowden Mfg., Co., Farm Implements, Colfax.	Kelley, O. S., Farm Implement Co., Iowa City.

AGRICULTURAL IMPLEMENTS, MANUFACTURES—CONTINUED.

Lowden, A. G., Impl't Mfg., Fairfield.
 Litchfield Mfg. Co., Farm Implants,
 Webster City, Iowa.
 McCall, M. H., Haying Tools Mfg.,
 Council Bluffs.
 Monarch Stacker & Feeder Co., Cedar
 Falls.
 Morrisson Mfg. Co., Plows, Fort Mad-
 ison.
 Mellen and Anthony Corn Husker
 Machine Mfg., Akron.
 Moyer, F. X., Hay Press Mfg.,
 Spencer.
 Milner, J. K., Shovel Board Mfg.
 Clinton.
 Phillips and Hunt Box Car Loader
 Mfg. Co., Ottumwa.
 Pella Stacker Co., Pella.
 Parson Rich & Co., Feeder Mfg. Co.,
 Newton.
 Parsons Band Cutter Agr'l Imple-
 ments, Newton.
 Russell & Co., Mfgs. of Band Cutters,
 Sheldon.

Roney Returner Co., Impl. Mfg., In-
 dependence.
 Randolph Straw Stacker Co., Newton.
 Sioux City Plow Mfg. Co., Sioux City.
 Sheldon Self Feeder & Machine Mfg.,
 Sheldon.
 Sioux City Bale and Tie Mfg. Co.,
 Sioux City.
 The Implement Mfg. Co., A. B. Fren-
 ch Mgr., Davenport.
 Washington Shoveling Board Co.,
 Washington.
 Wiles & Adams Plow Mfgs., Mus-
 catine.
 Woods Rapid Dirt Loader Mfg. Co.,
 Alden.
 Wood Bros. Self Feeder Mfg., Des
 Moines.
 Wideman, M. F., Awning Mfg., Bur-
 lington.
 Zwiebel Agricultural Implement Mfg.,
 Rock Valley.

AGRICULTURAL IMPLEMENT SALES AGENCIES.

Advance Thresher Agency, Des
 Moines.
 Aultman Taylor Co., Agricultural Im-
 plements, Cedar Rapids.
 Aultman & Miller Co., Wholesale Im-
 plements, Council Bluffs.
 Avery Ag., Impl't Mfg., Des Moines.
 Bradley, David Son & Co., Wholesale
 Impl'ts, Council Bluffs.
 Burke, J. W., Ag. Impl'ts, Davenport.
 Clausen, John, Implement Agency,
 Council Bluffs.
 Children, E. & Son, Implement Ag-
 ency, Council Bluffs.
 Davis & Co., Farm Machinery Deal-
 ers, Sioux City.
 Des Moines Bale Tie Co., Des Moines.
 Eckert & Williams Impl'ts and Grain,
 Northwood.
 Eckert & Williams Farm Machinery,
 Forest City.
 Granger, The Farm Implement Co.,
 Fort Dodge.
 Gaar Scott Impl't Agency, Des Moines.
 Gale Manufacturing Co., Implants,
 Des Moines.
 Gilman & Walker Farm Implants,
 Eldora.
 Huber Mfg., Implement Agency, Des
 Moines.
 International Harvester Co., of Iowa,
 Sup't office, 67 Monroe St., Chicago.

Kingman & Galbraith Implement Ag-
 ency, Des Moines.
 Keystone Mfg. Co., Implement Ag-
 ency, Council Bluffs.
 Le Mars Implement Co., Le Mars.
 Mitchell Implement Co., Fort Dodge.
 McCormick Harvesting Co. (branch of
 International Co.) Council Bluffs.
 Miles Hardware and Impl'ts, Grinnell.
 Nichols Shepard Co., Implement Ag-
 ency, Des Moines.
 Nashua Farm Implement Co., Nashua.
 Pioneer Wholesale Impl't Co., Council
 Council Bluffs.
 Peru Plow & Implement Co., Council
 Bluffs.
 Plano Mfg. Co., Implement Agency,
 Des Moines.
 Russell & Co. Wholesale Implants,
 Council Bluffs.
 Reeves & Co. Implement Agency, Des
 Moines.
 Sandwich Mfg. Co., Impl'ts etc.,
 Council Bluffs.
 Stenmeir Dettmer, Farm Impl'ts,
 Elkader.
 Van Brunt, H. H., Wholesale Impl'ts,
 Council Bluffs.
 Walker Syre Coal and Farm Imple-
 ments, Eldora.

ART GLASS AND SHOW CASE MANUFACTURES.

Davenport Show Case Mfg. Co., Davenport.
Des Moines Show Case Mfg., Des Moines.

German Press and Plate Glass Co., Davenport.
Pittsburg Plate Glass Co., Davenport.

BAG AND PAPER BOX MANUFACTURES, (PAPER AND WOOD).

Bestoval Bag Mfg. Co., Dubuque.
Davenport Bag & Paper Co., Mfgs., Davenport.
Des Moines Paper Box Mfg. Co., Des Moines.
Davenport Paper Box & Paste Mfg., Davenport.
Dickson E. Horton, Paper Box Mfg., Dubuque.
Duyrmeyer & Dishelhorse Box Mfg., Burlington.
Keokuk Paper & Cigar Box Mfgs., Keokuk.

Mississippi Box Mfg. Co., Muscatine.
Sioux City Paper Box Mfg. Co., Sioux City.
Schneider, C. E. Co., Shirt Box Mfg., Des Moines.
Stein, Wm., Paper Box Mfg., Davenport.
St. Clair Box Mfg., Muscatine.
Smith, F. & Sons, Box Mfgs., Clinton.
Smith, Albert J., Box Mfg., Dubuque.
Third Street Box Mfg. Co., Burlington.
Tabor Burns Paper Box Mfg. Co., Burlington.

BAKERIES, BREAD, CAKE AND PIES.

Burris, Geo. H. Bakery, Independence.
Burlington Bread Co., Burlington.
Cutler Bros., Wholesale Bakery, Des Moines.
Chicago Bakery, Cedar Rapids.
Chubb Bros. Bakery, Burlington.
Dietz H., Bakery and Confectionery, Clinton.
Des Moines Bakery Co., Des Moines.
Georges Bakery, Sioux City.
Garton's Bakery, Des Moines.
Fleischman Bros., & Co., Yeast Mfgs., Davenport.
Homan's Bakery, Des Moines.
Independent Baking Co., J. B. C. Teddy, Mgr., Davenport.

Johnson, A. R., Sioux City.
Korns, H. & Sons Bakery, Davenport.
Kilpatrick, Wm., Bakery, Oskaloosa.
Korns, Vienna Bakery, Des Moines.
Kern, Fred, Steam Bakery, Cedar Rapids.
Metz Henry Bakery Co., Sioux City.
Mulgrew, T. J., Bakery, Dubuque.
New England Steam Bakery, Sioux City.
Peoples' Bakery Co., Dubuque.
Schinton, C., Bakery, Keokuk.
Union Bakery Co., Iowa City.
Vienna Bakery, Webster City.
Waterloo Bakery, Waterloo.

BARRELS AND BUTTER TUB MANUFACTURES.

American Cooperage Association, Anamosa, Pen.
Amundson, S., Butter Tub Mfg., Webster City.
Best, W. J., Cooperage, Villisca.
Byorley, A. J., Cooperage, Northwood.
Barker, W. J., Butter Tub Mfg., Sioux City.
Brenmer & Sons, Cooperage, Davenport.
Coopers' Union Cooperage, Davenport.
Dubuque Brewing & Malting Co., Dubuque.
Erhardt, Emil, Cooper and Butter Tub Mfg., Bellevue.

Estherville Butter Tub & Barrell Mfg., Estherville.
Fort Dodge Butter Tub and Package Mfg., Fort Dodge.
Hyde, Sam, Butter and Eggs Barrel Mfg., Coggin.
Hilpert, Fred & Sons, Cooperage.
Kemper, F. C., Cooperage, Muscatine.
Keokuk Barrell & Hoop Co., Keokuk.
Key City Cooperage & Mfg. Co., Dubuque.
Moehn, Adam, Cooperage Mfgs., Burlington.
Maquoketa Barrell Head Mfg., Maquoketa.
Miller, F. C. & Son, Butter Tubs Mfgs., Maquoketa.

BARRELS AND BUTTER TUB MANUFACTURES—CONTINUED.

McMackin, S. T., Butter Tub Mfg., Storm Lake.	Sexton, F. D., Butter Tub Mfg., Osage.
Mueller, Andrew, Cooper, Dubuque.	Woodruff Kroy Cooperage Co., Daven- port.
Rea & Wilson Stave Mfg., Colesburg.	Waeloo Butter Tub & Barrel Mfg. Co., Waterloo.
Seymour, J., Cooperage, Ottumwa.	
Sperbeck & Lambert Butter Tub Mfg. Co., Algona.	

BASKET MANUFACTURES.

Bagnard, Prosper Basket Mfgs., Mus- catine.	Legget, John, Box and Basket Mfg., Council Bluffs.
Burlington Basket Co., Burlington.	

BEER AND MALT LIQUOR MANUFACTURES.

Anderson, Julius, Brewer, Clinton.	Muscatine Brewery, Muscatine.
Clinton Brewing Co., Clinton.	Pechstein & Nagle Brewery Co., Keokuk.
Davenport Malting Co., (Beers) Dav- enport.	Rock Island Brewing Co., Muscatine.
Davenport Malt & Grain Co., (Beers) Davenport.	Sioux City Brewing Co., Sioux City.
Dostall Bros., Western Brewery, Iowa City.	The Magnus Brewing Co., Cedar Rapids.
Dubuque Star Brewing Co., Dubuque.	Union Brewery, Iowa City.
Hells, C., Brewery, Burlington.	Worth Miller & Ende, Brewers, Bur- lington.
Independent Malting Co., Ernst Zol- ler, Mgr., Davenport.	Western Brewery, Martin Moehn, Bur- lington.

BOTTLERS AND MINERAL WATERS.

Aschermann, C., Bitter Mfgs., Daven- port.	Harbach, F., Bottling Works, Des Moines.
Albia Mineral Water & Pop Factory, Albia.	Iowa City Bottling Works, Iowa City.
Arlen & Ingwerson, Bottlers, Clinton.	Iowa Bottling Works, Clinton.
Boyden Bottling Works, Mason City.	Kelley, Daniel L., Bottler, Cherokee.
Burk, J. & Co., Bottlers, Keokuk.	Kleis, C. E., Carbonated Drinks, Du- buque.
Clarinda Bottling Works, Clarinda.	Key City Bottling Works, Dubuque.
Chesterman & Co., Soda Water Mfg., Sioux City.	Lanes' Bottling Works, Soo City.
Calmar Bottling Works, Calmar.	Lane, R. R., Bottling Works, Wash- ington.
Chrisman, W., Bottler, Colfax.	LeMars Bottling Works, LeMars.
Colfax Mineral Ware Co., H. Fellows, Colfax.	McClain & Son, Bottlers, Red Oak.
Clinton Bottling House, Clinton.	Mason City Bottling Works, Mason City.
Cummings, F. T., Soda Water Mfg., New Hampton.	Mineral Spring Bottling Co., Hum- boldt.
Charles City Bottling Works, Charles City.	Peasley, Ed., Bottler, Dubuque.
Conner, J. P., Bottler, Dubuque.	Starr, M. M., Bottling Co., Oakaloosa.
Easton Alexander Soda Water Mfg., Fairfield.	St. Clair, J. B., Bottler, Muscatine.
Estherville Bottling Works, Esther- ville.	Smith, Roy A., Bottler, Eldora.
Fort Dodge Bottling Works, Fort Dodge.	Shiveley, H., Bottler, Perry.
Great Western Soda Fountain Mfg. Co., E. A. Del Fosse, Sioux City.	Stewart, C., Pop and Mineral Water Mfg., Algona.
	Stellern, J. G., Soda Water Mfg., Fort Madison.
	Swertzeger, F. L., Bottler, Muscatine.

BOTTLERS AND MINERAL WATERS—CONTINUED.

Scholze, W. C., Bottling Works, Charles City.	Wayn, J. E., Bottler, Chariton.
Tama Bottling Works, Tama.	Waterloo Bottling Works, Waterloo.
Witt, H. J. Bottling Works, Davenport.	Webster City Bottling Works, Webster City.
Weldon, S. H., Bottling Works, Iowa Falls.	X. L. C. R. Steam Bottling Co., Des Moines.
Wharton & Hitchkin, Bottlers, Newton.	Young & Curtis, Bottlers, Monticello.

BOOT AND SHOE MANUFACTURES.

Anderson, Wm., Shoe Mfg., Dubuque.	Richardson, George, Shoe Co., Dubuque.
Huiskamp Bros., Boots and Shoes, Keokuk.	Strohmeyer Bros., Boot and Shoe Mfgs., Webster City.
Green-Wheeler Shoe Mfg. Co., Fort Dodge.	Van Engen Wooden Shoe Mfg., Orange City.
Northwestern Felt Shoe Co., Webster City.	

BOOTS AND SHOES WHOLESALE AND RETAIL.

Bentley & Olmstead, Wholesale Shoes, Des Moines.	Hertzler, D. E., and D. W., Retail Shoes, Burlington.
Bodde & Larsen Shoe Co., Keokuk.	Kahler's Retail Shoes, Des Moines.
Beals & Torrey, Retail Shoes, Dubuque.	Lantzky-Allen Shoe Co., Dubuque.
Feld-Ingalls, Retail Shoes, Des Moines.	North Star Shoe Co., Davenport.
Goss & Co., Wholesale Shoes, Centerville.	Oskaloosa Shoe Co., Oskaloosa.
Higman & Skinner, Wholesale Shoes, Sioux City.	Peterson Shoe Co., Retail, Keokuk.
	Rixon, Fred, Boots and Shoes, Clinton.
	The S. B. & S. Shoe Co., Davenport.
	White, W. L., Retail Shoes, Des Moines.

BOOKS AND STATIONERY, (WHOLESALE AND RETAIL).

Bottell Bros. Co., Wholesale Paper and Stationery, Dubuque.	Harger & Blish Books and Wall Paper, Dubuque.
City Book and Stationery Co., Shisler & Chase, Des Moines.	

BOILER MANUFACTURES.

Boone Boiler Works, Boone.	Quirk, Patrick, B., Boiler Mfg., Davenport.
Davenport Boiler Works, Durbin Grupe, Mgr., Davenport.	Spencer, Fred C., Boiler Mfgs., Sioux City.
Eagle Steam Boiler Works, Dubuque.	Star Boiler Mfg., Clinton.
Garren & Hines Boiler Mfgs., Muscatine.	Seevers Mfg. Co., Boilers and Heaters, Oskaloosa.
Musser & Wright, Boiler Mfgs., Waterloo.	Turner & Brownlee, Boiler Makers, Des Moines.
McDanniel, C., Boiler Mfg., Ottumwa.	

BRICK AND TILE MANUFACTURES.

- Anderson, Carl, Brick & Tile Co., Council Bluffs.
- Anson Co., Brick Mfg., Marshalltown.
- Ackley, D., Brick Mfg., Vinton.
- Atlantic Brick Works, Atlantic.
- American Brick & Tile Co., Mason City.
- Armstrong Brick & Tile Co., Armstrong.
- Brugenhenke, H., Brick Mfg., Council Bluffs.
- Bromley Brick & Tile Co., Bromley.
- Bradshaw & Co., Brick Mfgs., Fort Dodge.
- Bentley, C. B., Brick Manufacturers, Tama.
- Boone Clay Works, Brick and Tile, Boone.
- Bullington, C., Brick Mfg., Polk City.
- Burkholder, J. B., Brick Mfg., New London.
- Bolton Bros., Brick Mfgs. What Cheer.
- Broodston, B. J., Brick Mfg., Montezuma.
- Balley, S., Brick Mfg., Chariton.
- Baldwin, O. T., Brick Mfg., Packwood.
- Bessley, H. A., Brick Yards, Cedar Rapids.
- Bessley, C. L., Brick Mfg., Cedar Rapids.
- Bessley, L. C., Brick Mfg., Council Bluffs.
- Burlington Granite Brick Co., Burlington.
- Brock, J., Brick Mfg., Reinbeck.
- Barnhart, Mrs. C., Brick Mfg., Charles City.
- Berry, Wm. E., Brick Mfg., Guthrie Center.
- Curtis, J. C., Brick Mfg., Red Oak.
- Cook, B. E., Brick Mfg., Red Oak.
- Craybill, J. M., Brick Mfg., Clarinda.
- Conger, J. A., Brick and Tile Mfg., Goldfield.
- Corey, F., Pressed Brick Mfg., Lehigh.
- Cameron, George, Brick Mfg., Maes.
- Contant, E. E., Brick Manufacturer, New Hampton.
- Capital City Brick Co., Des Moines.
- Clarksville Brick Mfg. Co., Clarksville.
- Cretzmeier, H., Brick Mfg., Waverly.
- Clark & Peatman, Brick Mfg., Centerville.
- Cedar Falls & Waterloo Brick and Tile Co., Cedar Falls.
- Chamberlain, J. E., Brick Mfg., Minburn.
- Diebert, A. L., Brick and Tile Mfg., Mt. Vernon.
- Diebert, A., Brick and Tile Mfg., Lisbon.
- Dilsaver, Geo. C., Brick Mfg., Hume-ston.
- Davenport Grantold Paving Co., Davenport.
- Davenport Paving Brick & Tile Co., Buffalo.
- Dawson, J. & Sons, Brick Mfg., Fremont.
- Dausken & Wagner, Brick Manufacturers, Marengo.
- Des Moines Co-operative Brick Co., Des Moines.
- Dale Bros., Brick Mfgs. Des Moines.
- Dilsaver, Geo. C., Brick Mfg., Garden Grove.
- Drake Investment Co., Brick Mfgs., Radcliffe.
- Dietrich Bros., Brick Mfg. Co., Du-buque.
- Dale Goodwin, Brick Mfg., Grand Junction.
- Elmore & Armstrong, Brick Mfg., Seymour.
- Erlwine, Wm., Brick Mfg., Mapleton.
- Eldora Pipe & Tile Co., Eldora.
- Fenstel, John, Stoneware and Flour-pot Mfg., Muscatine.
- Fort Dodge Stoneware & Pottery Mfg., Fort Dodge.
- Fort Dodge Clay Works, Brick Mfg., Fort Dodge.
- Flint Brick Mfg., Des Moines.
- Frederigill Brick Mfgs., Des Moines.
- Frost Pressed Brick Co., Des Moines.
- Fox, David, Brick Mfg., Sheffield.
- Gladbrook Pressed Brick Co., Gladbrook.
- Gethemann Bros., Brick Mfgs., Gladbrook.
- Gontung, Valentine & Co., Brick Mfgs., Davenport.
- Griffe, Mackson W., Pottery, Boone.
- Gilbert, Albert J., Pottery Mfgs., Boone.
- Goalocher, Chris., Brick Mfg., Iowa City.
- Goss, M., Brick Mfg. Co., Iowa City.
- Granite Brick Co., Des Moines.
- Gate City Brick Works, Keokuk.
- Gibson Marion Brick Mfg., Coon Rapids.
- Goldwalthe, Nathan E., Brick Mfg., Boone.
- Green, C., Brick Mfg., Denison.
- Gillette Brick & Tile Mfg. Co., Corn-ing.
- Greenfield Pressed Brick Co., Green-field.

BRICK AND TILE MANUFACTURES—CONTINUED.

Gillette & Martin, Brick Mfg., Anita.	Lower Brick Co., Sioux City.
Gasser, Albert, Brick Mfg., Dubuque.	Lehigh Brick and Tile Works, Lehigh.
Hagerman & Koething Brick Mfg., Muscatine.	Lehigh Clay Works, Lehigh.
Hannaman, F., Brick Mfg., State Center.	Leonard, J. A. Brick and Tile Co., LeMars.
Hagermeister, Carl, Brick Mfg., Muscatine.	Linn Grove Brick & Tile Mfg., Linn Grove.
Holman, C. J., & Bros., Mfgs., Sioux City.	Lohrville Brick & Tile Co., Lohrville.
Hicks, George, Brick Mfg., Grant City.	Likes Improvement Brick Mfgs., Des Moines.
Halligan Brick & Tile Co., Davenport.	Lane Brick Mfg. Co., Sheldon.
Hurley, S. A., Brick Mfg., Sheldon.	Lee, Charles, Brick & Lime Mfg., Elkader.
Hyenheims Bros., Brick Mfgs., Muscatine.	Livermore Brick & Tile Mfg., Livermore.
Heming, Wm., Brick Mfg., Newton.	McKinley, G. S., Brick Mfg., Bedford.
Harrington, Henry, Brick Mfg., Colfax.	Muscatine Pressed Brick Co., Muscatine.
Hugg & Harmon Brick and Tile Co., Polk City.	McHose, C. E., Brick and Tile Mfg., Maxwell.
Heldmlech, F. W., Brick Mfg., Hedrick.	Marshalltown Pottery Works, Marshalltown.
Hess & Johnson Brick Mfg., Milo.	McHose Bros., Brick & Tile Co., Grinnell.
Hatch, Aug. L., Brick Mfg., Central City.	McAllister Brick Mfg. Co., Newton.
Henning Williams Brick Mfg., Baxter.	McKissick & Kibbs Brick Mfg., De Sota.
Harris & Chamberlain, Brick Mfg., Adel.	Manilla Pipe & Tile Works, Clinton.
Harris, L. M., Brick Mfg., Rockford.	Mason City Clay Works, Mason City.
Hart, John, Brick Mfg., Hampton.	Maine Brick Co., Des Moines.
Heine A., Brick Mfg., Dubuque.	Miller, F. B., Estate Brick Mfg., Center Point.
Iowa Brick Mfg. Co., Des Moines.	McClurkin & Ochiltree Brick Mfgs., Morning Sun.
Iowa Pipe Tile Co., Des Moines.	Mardis, Thomas, Brick Mfg., Winterset.
Iowa Drain & Tile Co., Clinton.	Martin & Junkin Brick Mfgs., New Sharon.
Interstate Drainage and Investment Co., Britt.	Myer, Peter, Brick Mfg., New Sharon.
James Payton, Brick Manufacturer, Centerville.	Madrid Brick & Tile Co., Madrid.
Johnson, August H., Brick Mfg., Medlapolis.	McFarland & Booher Brick & Tile Mfgs., Minburn.
Johnson C., Brick Mfg., Center Point.	McKinney, Wm., & Co., Brick Mfgs., DeWitt.
Johnson, D. O., Brick & Tile Mfg., Charter Oak.	Monona Brick Works, Monona.
Jewell Brick & Tile Co., Jewell Junction.	Mason City Brick & Tile Co., Mason City.
Johnson, Fred, Brick Mfg., Hamburg.	Miller & Miller Brick Mfg., Clermont.
Jenkins, W. H., Brick Mfg., Leon.	Mattox, Chas., Brick Mfg., Manchester.
Korn & Meyer, Brick Mfgs., Decorah.	Newcomb, Walter & Co., Brick Mfg., Corning.
Kelley Brick & Tile Co., Slater.	Nicholson, G. G., Brick Mfg., What Cheer.
Kuehne, A. H., Mfg., Rock Valley.	Netcott, George, Brick Mfg., Independence.
Kenzie, D. B., Brick Mfg., Oakland.	Ostdick, H. B., Brick Mfg., Ottumwa.
Kettle, Geo. H., Brick Mfg., Tipton.	Otis Martin Brick Mfg., Lake Mills.
Keota Brick and Tile Works, Keota.	Owen, Wm. C., Brick Mfg., Exira.
King, Ed., Brick Mfg., Knoxville.	
Kuykendahl, W. L., Brick Mfg., Dunlap.	

BRICK AND TILE MANUFACTURES—CONTINUED.

- Oakes Nicholas Brick Mfg., Iowa City.
 Ottumwa Brick & Construction Co., Ottumwa.
 Oakes, G. L., & Co., Brick Mfgs., Columbus Junction.
 Orcutt, George, Brick Mfg., Monroe.
 Ostrum, A. P., Brick Mfg., Algona.
 Oskaloosa Paving Brick Mfg. Co., Oskaloosa.
 O'Neill & Kallmberger Brick Mfg., Carroll.
 Oelwein Pressed Brick Co., Oelwein.
 Petersen & Smith, Brick Mfgs., Sioux City.
 Pitkin Brick & Tile Co., Forest City.
 Pohlman, H. B., & Sons Brick Mfgs., Davenport.
 Pierce, B. S., Brick and Tile Mfg., Winfield.
 Preston Tile Works, Preston.
 Pella Drain Tile Co., Pella.
 Palton & Munsen Brick Mfg., Lohrville.
 Platt, C. B., Pressed & Fire Brick Mfg., Van Meter.
 Perry Brick & Tile Mfg., Perry.
 Pentecost, H., Brick Mfg., Panora.
 Piner, John, Brick Mfg., Stuart.
 Quasdorf, C. A., Brick Mfg., Dows.
 Rankin Bros., Brick & Tile Mfgs., Shenandoah.
 Rhodes Brick & Tile Works, Rhodes.
 Rowley, Benj., Brick Mfg. & Coal, Sigourney.
 Raney Bros., Brick Mfgs., Fairfield.
 Robinson, Jerry B., Brick Mfg., Mt. Vernon.
 Redfield Brick & Tile Co., Redfield.
 Rogers, F. A., Brick Mfg., Fayette.
 Stone, E. A., Brick Mfg., Malvern.
 Samuels, Wm., Brick Mfg., Muscatine.
 Size & Carpenter, Brick Mfg., Marshalltown.
 Sioux City and Sergeant Bluffs Brick & Tile Co., C. W. Ritz, Mgr., Sergeant Bluffs.
 Sioux City Paving Brick Co., W. R. Lower, Sec., Sioux City.
 Sioux City Brick & Tile Co., M. L. Flinn, Sioux City.
 Swift, H. D., Brick & Tile Mfg. River-side.
 Schultz, H., Brick Mfg., Decorah.
 Shay, George, Brick Mfg., Traer.
 Stickie, M., & Co., Brick Mfg., Harwarden.
 Sorenson & Smith Brick Mfg., Harlan.
 Shannon, Samuel Brick Manufacturer, Shellsburg.
 Smith, Robert F., Brick Mfg., Belle Plaine.
 Stillwell Bros., Brick Mfgs., Waukon.
 Schumacher & Fuller, Brick Mfgs., Muscatine.
 Susmilch, Furman & Prethroe, Brick Mfgs., Eldora.
 Shaw, C. E., Brick & Tile, Iowa Falls.
 Smith, E. J., & Son, Brick Mfgs., North English.
 Shackelford Brick Mfg. Co., Des Moines.
 Star Brick Co., Des Moines.
 Smith, F. B., Brick Mfg., Anamosa.
 Smith, J. J., Brick Mfg., South English.
 Swift, F. E., Brick & Tile Mfg., Washington.
 Stuckey, Dan W., Tile Mfg., Cedar Rapids.
 Straight Bros.' Brick & Tile Works, Fonda.
 Spann, Herman, Brick Mfg., Keokuk.
 Schaumberg, Conrad, Brick Mfg., Newton.
 Slater, John, Brick Mfg., Madrid.
 Sioux Rapids Brick & Tile Co., Sioux Rapids.
 Stead Bros., & Guenther, Brick Mfg., Waterloo.
 Stark, Chas., Brick Mfg., Muscatine.
 Spencer Brick & Tile Mfg., Spencer.
 Tramp Bros.' Brick Tile Works, Creston.
 Trojosky, Chas., Brick Mfg., Norway.
 Tramp Bros.' Brick & Tile Works, Audubon.
 Townsend, D. W., Brick Mfg., Cherokee.
 Tallett, James, Brick Mfg., Clinton.
 Villisca Brick & Tile Co., Villisca.
 Van Scoy, J. S., & Bros.' Brick Mfg., Logan.
 Williams, Mark, Brick Mfg., Council Bluffs.
 Weaver, John P., Brick Mfg., Council Bluffs.
 Wild, John & Son., Brick Mfg., Toledo.
 White, Frank, Brick Mfg., Albia.
 Wright, Dill & Co., Brick Mfgs., Knoxville.
 Wulke Bros.' Brick Mfgs., Melbourne.
 Williams Brick Co., Des Moines.
 Wheeler, Noah V., Brick Mfg., Cresco.
 Wert, A. S., Brick Mfg., Ida Grove.
 Woolsey Brick Co., Des Moines.
 Wilson & Lantz, Pottery, Iowa City.
 Williamsburg Brick & Tile Co., Williamsburg.

BRICK AND TILE MANUFACTURES—CONTINUED.

Worley, W. J., Brick Mfg., Keokuk.
 Wheeler, L. L., Brick & Tile Mfg., Madrid.
 Webster City Brick & Tile Mfg., Webster City.

X. Y. Z. Tile Works, Pierce & Haas, Eldora.
 Yegge Bros.' Brick Mfgs., Boone.
 Zerber, O. M., Brick Mfg., Wapello.
 Zartman Brick Mfg. Co., Jamaica.

BROOM AND BRUSH MANUFACTURES.

Austin, Fred, Broom Mfg., Center Albia Broom Mfg., Albia.
 Baldwin, G. H., Broom Mfg., LeMars.
 Brown, George, Broom Mfg., Audubon.
 Black, W., Broom Mfg., Washington.
 Berry, W. S., Broom Mfg., Larchwood.
 Bagenstoss, Wm., Broom Mfg. Co., LaPorte City.
 Campbell, J. A., Broom Mfg., Denison.
 Curtiss, J. H., Broom Mfg., Chariton.
 Chapman, E. A., Broom Mfg., Hamburg.
 Denker Bros.' Broom Mfgs., Dubuque.
 Flatters, W., Broom Mfg., Chelsea.
 Frances & Norling, Broom Mfg., Burlington.
 Gordon, W. L., Broom Mfg., Coin.
 Gibson, I. J., Broom Mfg., Red Oak.
 Gurdon & Grosvenor Broom Mfgs., Morningside, Council Bluffs.
 Graft, H., Broom Mfg., Four Corners.
 Hinsell, D. C., Broom Mfg., Osage.
 Harrah & Stewart, Broom Mfg., and Bicycle Repairs, Des Moines.
 Harper, H. A., Fonna Brush Mfg., Fairfield.
 Harmes, J., Broom Mfg., Knoxville.
 Hoag Duster Mfg. Co., Monticello.
 Hall, H., Broom Mfg., Perry.
 Heineman, L. C., Broom Mfg., Webster City.
 Kuhn, B. F., Broom Mfg., Burlington.
 Lee Broom & Duster Mfg., Davenport.
 Lyons, Theodore, Broom Mfg., Akron.
 Lauritzen, N., Broom Mfg., Cedar Falls.

Lundgren, Chris., Broom Mfg., Denison.
 Metzger, Harry, Broom Mfg., Muscatine.
 Molgard, J., Broom Mfg., Mt. Pleasant.
 Metzger, James, Broom Mfg., Washington.
 M. C. Stone, Broom Mfg., Sheldon.
 Mason City Broom Co., Mason City.
 Miller, F. A., Broom Mfg., Dubuque.
 Olmstead & Son, Broom Mfg. Co., Ackley.
 Palliday, Geo. H., Broom Mfg., Alorton.
 Pelton, W. H., Broom Mfg., Creston.
 Peltons' Brooms Mfg., Cedar Rapids.
 Russell, C. E., Broom Mfg., Toledo.
 Randsell & Co., Milling and Broom Mfg., Tama.
 Read, Jas., Broom Mfg. Co., Ackley.
 Sioux City Broom Mfg. Co., Sioux City.
 Stoner, Ben F., Broom Mfg., Farmington.
 Schaeffer, John, Broom Mfg., Fairfield.
 Tegtmeier Broom Mfg. Co., Ida Grove.
 Thompson, Cassius, Broom Mfg., Centerville.
 The Lindsey Broom Mfg. Co., Burlington.
 Visser C., Brush Mfg., Pella.
 Waymer, Ben, Broom Mfg., Belle Plaine.
 Waterloo Broom Works, Waterloo.

BUTTONS AND BUTTON BLANKS MANUFACTURES (PEARL).

Ashton & Buller Button Mfgs., Muscatine.
 Automatic Button Co., Muscatine.
 Albert, Charles G., Button Mfg., Lansing.
 Brogan & Stiles, Button Works, Muscatine.
 Boston, Fred W., Button Mfg., Muscatine.
 Boston Sr., Fred, Button Blank Cutters, Muscatine.

Boepple Pearl Button Mfgs., Muscatine.
 Bernard & Nickey Pearl Button Mfgs., Muscatine.
 Boepple Button Mfg., Davenport.
 Burlington Pearl Button Mfg. Co., Burlington.
 Co-operative Button Works, Muscatine.
 Concannon, L. H., Button Works, Muscatine.

BUTTONS AND BUTTON BLANKS MANUFACTURES—CONTINUED.

Chalmers, Harvey & Son, Button Mfg., Guttenberg.	Maher, T. F., Button Works, Muscatine.
Davenport Pearl Button Mfg., Davenport.	Montgomery Pearl Button Factory, Guttenberg.
Dubuque Pearl Button Works, Webb & Erickson, Dubuque.	New York Button Works, Muscatine.
Excelsior Pearl Button Co., Muscatine.	Nielander & Co., Capoli Button Co., Lansing.
Empire City Pearl Button Works, Muscatine.	Pearless Button Factory, Columbus Junction.
Fry, George, & Co., Button Works, Muscatine.	Peerless Button Co., Muscatine.
Franklin, W. H., Button Works, Muscatine.	Reed, C. A., Pearl Button Mfg., Co., Burr Oak.
Griffin, C. A., Button Works, Muscatine.	Schmalz Bros.' Button Co., Muscatine.
Gertz, Harry, Button Blanks, Muscatine.	Schell & Weneck Button Mfg., Muscatine.
Hagerman Button Co., Muscatine.	The Vienna Pearl Button Mfg., Muscatine.
Holzhauser & Bauerbach Button Mfg., Muscatine.	Teichmiller Bros.' Button Mfg., Muscatine.
Iowa Button Works (Pen.) Fort Madison.	Vinton Pearl Button Co., J. R. Smith, Vinton.
Iroquois Pearl Button Mfg., Dubuque.	Weggen, M., Bros.' Button Mfg., Muscatine.
Keystone Button Works, Muscatine.	Wisler, Chris., Button Mfg., Muscatine.
Lansing Button Co., J. M. Turner, Lansing.	Wisler, W. I., Button Saw Mfg., Muscatine.
Lyons Pearl Button Factory, Clinton.	Zogg & Heisemann Pearl Button Mfg., Buffalo.
Mississippi Pearl Button Co., Burlington.	
Mathey, H., Button Works, Muscatine.	

CAN MANUFACTURES (TIN).

American Can Mfg. Co., Davenport. | Iowa Can Mfg. Co., Des Moines.

CANNING VEGETABLES AND FRUITS.

Anderson Canning Co., Keokuk.	Independence Canning Corporation, Independence.
Atlantic Canning Co., Atlantic.	Knoxville Canning Co., Knoxville.
Baxter Bros. Canning Co., Wapello.	Kelley Canning Co., Waverly.
Bird, Canning Co., Hamburg.	Lake Mills Canning Co., Lake Mills.
Cedar Falls Canning Co., Cedar Falls.	LaPorte Canning Co., LaPorte.
Cedar Rapids Canning Co., Cedar Rapids.	Marshalltown Canning Co., Marshalltown.
Dawes Canning Co., Webster City.	Pella Canning Co., Pella.
Elgin Canning Co., Elgin.	Red Oak Canning Co., Red Oak.
Forest City Canning Co., Forest City.	Shenandoah Canning Co., Shenandoah.
Fort Madison Canning Co., Fort Madison.	Sac City Canning Co., Sac City.
Fort Des Moines Canning Co., Webster City.	Tri-State Canning Co., Keokuk.
Gilman Corn Canning Co., Gilman.	Vinton Canning Co., Vinton.
Iowa Canning Co., Vinton.	Waterloo Canning Co., Waterloo.

CARRIAGE AND WAGON MANUFACTURES.

- Anderson, H. F., Carriage Mfg., Clinton.
- Brown, Sage & Ward Buggy Mfg., Co., Washington.
- Belmond, James A., Wagon & Carriage Mfg., Ottumwa.
- Burkens Wagon Mfg. Co., Pella.
- Brown Bros. Carriage Mfg. Co., Pella.
- Buggy H. & Son, Wagon Mfgs., Waukon.
- Bashaw & Son, Wagon Mfg., Centerville.
- Bell Implement & Carriage Mfg., Des Moines.
- Butt Bros. Wagon Mfg., Dubuque.
- Bradley Nicoulin, Dray Mfg., Algona.
- Beck & Son, Heavy Wagons Mfg., Cedar Rapids.
- Brandenburg & Holzer Wagon Mfg. Co., Independence.
- Burg Wagon Mfg. Co., Burlington.
- Burlington Buggy & Carriage Mfg. Co., Burlington.
- Bement Carriage Co., Burlington.
- Boeck, Paul E., Wagon Mfg., Charles City.
- Clarinda Carriage Mfg. Co., Clarinda.
- Campbell, J. B., Box Mfg., Knoxville.
- Capital City Carriage Mfg. Co., Des Moines.
- Crang, Fred, Vehicle Dealer, Des Moines.
- Cooper, A. A., Wagon Mfg., Dubuque.
- Dineen, John P., & Son Carriage and Wagon Mfgs., Sioux City.
- Des Moines Rubber Tire Co., Des Moines.
- Des Moines Automobile Co., Des Moines.
- Des Moines Wagon Mfg. Co., Des Moines.
- Davenport Spring Vehicle Co., S. Cartwright, Davenport.
- Dubuque Omnibus Co., Dubuque.
- Ernsdorf, John, Carriage Mfg., Dubuque.
- Fish Bros.' Wagon Mfg., Clinton.
- Folding Chair & Baby Carriage Mfg. Co., Davenport.
- Gilst Buggy Mfg., Knoxville.
- Gate City Carriage Co., Keokuk.
- Hartman, G. A., Buggy Top Mfg., Red Oak.
- Harkness & Friend Carriage Mfgs., Oskaloosa.
- Helser Bros.' Wagon & Carriage Mfg., Waukon.
- Heckelthorn Carriage Mfg., Fairfield.
- Hamilton, Lucy & Daczewitz Wagon Mfgs., Carroll.
- J. F. Kftron Carriage Works, Cedar Rapids.
- Kurtz Wagon Mfg., Marshalltown.
- Keys Bros.' Carriage Mfgs., Villisca.
- Kratzer Carriage Manufacturer, Des Moines.
- Keyes Bros.' Carriage Mfgs., Council Bluffs.
- Kelley, J. L., & Co., Implements and Vehicles, Burlington.
- Kennedy Buggy Mfg. Co., Manchester.
- Korns, W. H., Carriage Mfg., Cherokee.
- Laugerquist Carriage Mfg. Co., Des Moines.
- Laross, D. A., & Sons Buggy Top Mfgs., Grinnell.
- Mundt, J. H., Wagon Manufacturer, Muscatine.
- Madison, Hans, Sleigh Manufacturer, Northwood.
- Miller, Henry, Jr., Wagon Mfg., Decorah.
- Mason Carriage Mfg., Davenport.
- Mills Ellsworth Co., Buggy Frames and Thills Mfg., Keokuk.
- Nelson, C. H., Carriage Mfgs., Burlington.
- Newman, John, & Sons, Wagons and Carriages, Dubuque.
- O'Brien Wagon Works, Shenandoah.
- Orchard City Wagon Mfg. Co., Burlington.
- Orchard Carriage Buggy Top Mfg. Co., Burlington.
- Oskaloosa Wagon Mfg. Co., O. F. Skee, Mgr., Oskaloosa.
- Osgood Vehicle Co., Des Moines.
- Penrose Carriage Co., Burlington.
- Pitt, J. F., Carriage Mfg., Des Moines.
- Rhodes Carmean Buggy Mfg. Co., Marshalltown.
- Reese, Richard G., Carriage Mfg., Bonaparte.
- Ruddlo, Wagon Mfg., Lansing.
- Runnels, L., & Sons, Carriage Mfgs., Ackley.
- Safety Neck Yoke Mfg., Malvern.
- Spaulding Carriage Mfg. Co., Grinnell.
- Spinner Bros.' Carriage Co., Lansing.
- Snyder, Oattie, Wagon Manufacturer, Muscatine.
- Schrieber, Wm., Carriage & Wagon Mfg., Chariton.

CARRIAGE AND WAGON MANUFACTURES—CONTINUED.

Schmelzer, C., Wagon Mfg., Muscatine.
 Schlog, Fred, Wagon Mfg., Dubuque.
 S. W. Harris, Carriage Mfg. Co., Cedar Falls.
 Sylvester, C. A., Carriage Mfg., Charles City.
 Turney, J., & Co., Carriage and Wagon Mfg., Fairfield.
 Viseley, J., Cedar Rapids Carriage Mfg. Co., Cedar Rapids.
 Van Winkle Bros., Carriage Mfg., Keota.
 Webster & Moehl Carriage Trimming Mfg. Co., Marshalltown.
 Washington Carriage Mfg. Co., Hervey Bell, Mgr., Washington.
 West Davenport Wagon Mfg. Co., Davenport.
 Winslow Buggy Mfg. Co., Iowa Falls.
 Woninger, J., Carriage Mfg., Mason City.
 Wells Buggy Top Mfg. Co., Des Moines.
 Wehman & Ebert Carriage Mfg., Burlington.
 Worley, S. T., & Son Carriage Mfg., Keokuk.
 Yerger & Johnson Wagon Mfg. Independence.

CIGAR AND TOBACCO MANUFACTURERS AND DEALERS.

Ashley Cigar Mfg. Co., Soo City.
 Amsler, John, Cigar Mfg., Soo City.
 Allbrecht, Otto, Cigar Mfg., Davenport.
 Anderson Cigar Mfg., Albia.
 Andus, T. E. Cigar Mfg., Dubuque.
 Allbrecht Cigar Co., Des Moines.
 Arylward, John, Cigar Mfg., Burlington.
 Bernent, Titus, Cigar Mfg., Red Oak.
 Baumgardner, L., Cigar Mfg., Marshalltown.
 Bingham, C., Cigar Mfg., Ottumwa.
 Baer, Dema M., Cigar Mfg., Orange City.
 Beck & Martin Cigar Mfg., Davenport.
 Behm, A., Cigar Mfg., Davenport.
 Beckman, Mrs. M. J., Cigar Mfg., Winterset.
 Brechwald Bros., Cigar Mfg., Ida Grove.
 Bradley Bros., Tobacco Mfg., Dubuque.
 Bath, L. James A. Cigar Mfg., Columbus Junction.
 Babbitt & Roher Cigar Mfg., Winterset.
 Bevering, Wm., Cigar Mfg., Keokuk.
 Bevering, Wm., Cigar Mfg., Fairfield.
 Byron B. Briggs, Cigar Mfg., Manchester.
 Bueneke & Son Cigar Mfg., Maynard.
 Bower, Phillip Cigar Mfg., Hamburg.
 Brown, F. E., Cigar Box Mfg., Dubuque.
 Bernard, T., & Burk Co., Cigar Mfgs., Dubuque.
 Beck Gebhardt Cigar Mfg., Burlington.
 Baumberge, Fred Cigar Mfg., Burlington.
 Bohlen, Mrs. K. P., Cigar Mfg., Burlington.
 Conway, George M., Cigar Dealer, Wholesale and Retail, Soo City.
 Carlstrom, Swan, Cigar Mfg., 114 6th Street, Soo City.
 Crafford, John, Cigar Mfg., Greenfield.
 Cook, E. L., Cigar Mfg., Council Bluffs.
 Casebeer Bros., Cigar Mfg., Waterloo.
 Coates & Moerke Cigar Mfg., Boone.
 Culbertson Anna, Cigar Mfg., Perry.
 Christ & Maroney Cigar Mfgs., Perry.
 Cohen, J. R., Cigar Mfg., Des Moines.
 Coleman, Wm. E., Cigar Manufacturer, Madrid.
 Christian, Otto, Cigar Manufacturer, Denison.
 Castor Bros., Cigar Mfg., Leon.
 Connolly, Thomas, Carriage Mfg., Dubuque.
 Delghn, August, Cigar Box Mfg., Ottumwa.
 Dietrich, John F., Cigar Mfg., Marshalltown.
 Davenport Leaf Tobacco Co., Davenport.
 Davenport Cigar Box Mfg., Davenport.
 Deaken & Wallner, Cigar Mfg., Atlantic.
 Dimick & Wrate Cigar Mfg., Mason City.
 Daubrowa, Frank, Cigar Manufacturer, Maquoketa.
 Degitz, B. & Co., Cigar Mfg., Bellevue.
 Daniels, H. H., Cigar Mfg., Davenport.
 Dohrman, Henry, Cigar Mfg., Davenport.
 Donner, Will, Cigar Mfg., Fairfield.
 Drake, Ed. E., Cigar Mfg., La Porte.
 Dawes, Ed. A., Cigar Mfg., Adel.
 Dunn, James A., Cigar Mfg., Bloomfield.
 Dreegar, A., Cigar Mfg., Rockford.
 Dehuer, Andy, Cigar Mfg., Burlington.
 Denner, Joseph, Cigar Mfg., Burlington.
 Dairy City Cigar Mfg. Co., Manchester.
 Engstrand, J. D., Cigar Mfg., Sioux City.
 Elchmy, Fred W., Cigar Mfg., Ames.
 Ernstsdorp, Mary, Cigar Mfg., Boone.
 Ehrman, F. A., Cigar Mfg., Ottumwa.
 Elkader Cigar Mfg., Elkader.
 Ebert, Chris, Cigar Mfg., Burlington.
 Fry, E. A., Cigar Mfg., Red Oak.
 Farmington Cigar Mfg., Farmington.
 Fecht, Julius, Cigar Mfg., Ottumwa.
 Flint, Jesse, Cigar Mfg., Boone.
 Gremmell, Herman, Cigar Mfg., Muscatine.
 Godden Cigar Co., Emmetsburg.
 Gremmell, C. T., Cigar Mfg., Muscatine.
 Gottbrecht, F. G., Cigar Mfg., Muscatine.
 Gordon & Sons Cigar Mfgs., Sioux City.
 Goos, J., & Co., Cigar Mfgs., Davenport.
 Gillette Bros., Cigar Mfg., Atlantic.
 Gaethe, Julius, Cigar Mfg., Clinton.

CIGAR AND TOBACCO MANUFACTURERS AND DEALERS—CONTINUED.

Grau, A. G. Cigar Mfg., Mt. Pleasant.	Hubbert Bros.' Cigar Mfg., Dubuque.
Gabrio, W. F., & Co., Cigar Mfg., Des Moines.	Haeger, W. F., Cigar Mfg., Webster City.
Graves, F. J., & Sons, Cigar Mfgs., Ottumwa.	Hower, L., Cigar Mfg., Dubuque.
Gasaway, J. A., Cigar Mfg., Rockwell City.	Jacobs, W. C., Cigar Mfg., Oakland.
Grier Cigar Mfg. Co., Mason City.	Joseph, Wm. E., Cigar Mfg., Bedford.
Gardner, J. W., Cigar Mfg., Webster City.	Jacobson, P. M., Cigar Mfg., Davenport.
Glasser, D. C., Wholesale Tobacco and Cigars, Dubuque.	Jensen, P., Cigar Mfg., Council Bluffs.
Guyer, John, Cigar Mfg., Dubuque.	Johns, August E., Cigar Mfg., Fort Madison.
Gunther, P. G. & Co., Cigar Mfg., Burlington.	Jacobs, Ans. F., Cigar Mfg., Clinton.
Gaul, C. F., Cigar Mfg., Burlington.	Jaeger, A. G., Cigar Mfg., Dubuque.
Hettrick & Pressman Cigar Mfgs., Red Oak.	Jones, B. H., Cigar Mfg., Webster City.
Hartwell & Harden, Cigar Mfgs., Marshalltown.	Johnson, Alfred, Cigar Mfg., Logan.
Hergot, J. W., Cigar Mfg., Muscatine.	Jaeger, Ed. R., Cigar Mfg., Guthrie Center.
Hunger, John, Cigar Mfg., Burlington.	Kirkpatrick, C. W., Cigar Mfg., Burlington.
Holstein, Hermann J., Cigar Mfg., Burlington.	Kerriger Bros.' Cigar Mfgs., Muscatine.
Heineman, B. F., Cigar Mfg., Shenandoah.	Klumb, Phil., Cigar Mfg., Des Moines.
Hogan, J., Cigar Mfg., Eagle Grove.	Kahn, Tobias Cigar Mfg., Avoca.
Hutterer & Shafstall Cigar Mfgs., Sioux City.	Konbelinka, John, Cigar Mfg., Iowa City.
Hetwig, Frank J., Cigar Mfg., Decorah.	Kombereck, John, Cigar Mfg?.....
Hahn & Strong Cigar Co., Eldredge.	Klotz, Madison W., Cigar Mfg., Columbus Junction.
Haak Ferdinand, Cigar Mfgs., Davenport.	Kraft, Geo., Cigar Mfg., Keokuk.
Harkhard & Rhodes, Cigar Mfgs., Davenport.	Kirchner, Carl, Cigar Mfg., Cedar Rapids.
Highland, F. F., Cigar Mfg., Oskaloosa.	Kopell, Leon, Cigar Mfg., Cedar Rapids.
Howar, C. E., Cigar Mfg., Oskaloosa.	Kiline, Daniel, Cigar Mfg., Alta.
Hegenbarth, Mrs. C., Cigar Mfg., Hartley.	Kenealey, W. A., Cigar Mfg., Rockwell City.
Hober, Adolph, Cigar Mfg., Council Bluffs.	Knipp & Golwinaux, Cigar Mfgs., Waterloo.
Hansen, W. D., Cigar Mfg., Council Bluffs.	Koebele, P. A., & Co., Cigar Mfg., Waterloo.
Held, H., Cigar Mfg., Newton.	Koeppel, A. G., Cigar Mfg., Humboldt.
Hazen & Sutcliffe Cigar Mfgs., Spencer.	Kearnes, W. B., Cigar Mfg., Webster City.
Hoffman, Oscar F., Cigar Mfg., Fort Madison.	Kratochvill, F., Cigar Mfg., Hampton.
Howard, George A., Cigar Mfg., Fort Madison.	Levich, Jacob, Cigar Mfg., Des Moines.
Higdon Cigar Mfg. Co., Ottumwa.	Lamb, Jakes, Cigar Mfg., Marshalltown.
Hausmann, Louis C., Cigar Mfg., Fort Madison.	Laughlin, Robert, Cigar Mfg., Creston.
Hutton, Wm. A., Cigar Mfg., Fort Madison.	Lee, Martin J., Cigar Mfg., Council Bluffs.
Hayek, Joseph, Cigar Mfg., Cedar Rapids.	Leedham Bros.' Cigar Mfgs., Mt. Pleasant.
Halq, Joseph, Cigar Mfg., Cedar Rapids.	Lennon, John H., Cigar Box Mfg., Keokuk.
Haubert, John, Cigar Mfg., Keokuk.	Long, C. F., Cigar Mfgs., Fairfield.
Huth, Adam, Cigar Mfg., Cedar Rapids.	Lambert Bros.' Cigar Mfg., Independence.
Hendricks & Udell, Cigar Mfgs., Pella.	Leytze, Albert, Cigar Mfg., Independence.
Holmes, Andrew J., Cigar Mfg., Chariton.	Lehuw & Campbell, Cigar Mfgs., Osceola.
Harwitz, I., Cigar Mfg., Waverly.	Lanz, C. E., Cigar Mfg., Charles City.
Hoxie & Wilder, Cigar Mfgs., Boone.	Liesenberg, J. L., Cigar Mfg., Charles City.
Headen, Ray S., Cigar Mfg., Cedar Falls.	Myers & Underwood, Cigar Mfgs., Villisca.
Henderson Cigar Mfg., Centerville.	Maloney Cigar Mfg. Co., Council Bluffs.
Herman, Wm. E., Cigar Mfg., Bloomfield.	Madden, T. E., Cigar Mfg., Red Oak.
Hartley Thomas Cigar Mfg., Waukon.	Murray, J., & Co., Cigar Mfgs., Sioux City.
Helitz, John, Cigar Mfg., Burlington.	McGlone, J. M., Cigar Mfg., Shenandoah.
Holz, Frank, Cigar Mfg., Dubuque.	Malvern Cigar Mfg., Malvern.
Hauber, Albert, Cigar Mfg., Burlington.	Maurer, J., & Co., Cigar Mfgs., Sioux City.
	Morey & Myers Cigar Mfgs., Ottumwa.

CIGAR AND TOBACCO MANUFACTURERS AND DEALERS—CONTINUED.

- McGinnis, A. & Co., Cigar Mfgs., Hawarden.
Mormon Anton Cigar Box Mfg., Davenport.
Meyer & Bro. Cigar Mfg., Guttenbers.
Marx, A. J. & Co., Cigar Mfgs., Des Moines.
McAffery & Co., Cigar and Tobacco Mfg., Maquoketa.
McKee & Potter Cigar Mfgs., Ottumwa.
Moler, J. E., Cigar Mfg., Keokuk.
Mott, Frank, Cigar Mfg., Greene.
Moeller, Aug. L., Cigar Mfg., Denison.
Mathis Mets Co., Tobacco Mfgs., Dubuque.
Montgomery & Tenor, Cigar Mfgs., Stuart.
Mitchell, Joe, Cigar Mfg., Dubuque.
Mitch, J., Cigar Mfg., Manchester.
Norfolk Bros.' Cigar Mfg., Ottumwa.
Needham, D. L., Cigar Mfg., Harlan.
Niemyer, C. A., Cigar Mfg., Creston.
Nicholas Kuhn, The Cigar Co., Davenport.
Nashua Cigar Mfg., Nashua.
Nevis, Joseph, Cigar Mfg., Cedar Falls.
Nelson, Ole, Cigar Mfg., Clinton.
Newman, Otto C., Cigar Mfg., Dubuque.
Oskaloosa Cigar Mfg. Co., A. J. Sinclair, Mgr., Oskaloosa.
Ott, Clyde, Cigar Mfg., Marshalltown.
Ostdick, H. J., Cigar Mfg., Ottumwa.
Ollinger, John, Cigar Mfg., Dubuque.
Probst, Louis, Cigar Mfg., Marshalltown.
Peckham & Carlson Cigar Mfgs., Sioux City.
Poschen, Ed. A., Cigar Mfg., Fort Dodge.
Petersens, Nels. P., Cigar Mfg., Davenport.
Painter, F. F., Cigar Mfg., Centerville.
Pallister Bros.' Cigar Mfg., Ottumwa.
Potter & Weygand, Cigar Mfgs., Algona.
Pfennig, W. E., Cigar Mfg., Lake City.
Porter & Davenport, Cigar Company, Adair.
Phillipo, W. J., Cigar Mfg. Co., Corn-ing.
Porter, John T., Cigar Mfg.
Pain, George, Cigar Mfg., Mason City.
Palda, L. J., Cigar and Snuff Mfg., Elgin.
Quenny & Sanders, Cigar Mfg., Ottumwa.
Richards, Frank J., Cigar Mfg., Fort Dodge.
Raphael & Co., Cigar Mfgs., Davenport.
Rinde, Mark C., Cigar Mfg., Audubon.
Roensplece, L. P., Cigar Mfg., Oskaloosa.
Ritter, Otto W., Cigar Mfg.
Reeder, Louis B., Cigar Mfg., Fort Madison.
Richmond, H. F., Cigar Mfg., Keokuk.
Richmond, Ed. F., Cigar Mfg., Carroll.
Rasmussen, A., Cigar Mfg., Mapleton.
Rathman, C., Cigar Mfg., Stuart.
Roerschman, L. A., Cigar Mfg., Reinbeck.
Sorenson, Peter A., Cigar Mfg., Burlington.
Smith, James, Cigar Mfg., Burlington.
Sheer, Felix, Cigar Mfg., Burlington.
Sioux City Cigar Box Mfg. Co., Sioux City.
Striegel & Beach Cigar Mfg., Sioux City.
Sauerberg, Hans, Cigar Mfg., Davenport.
Senn, Rudolph Jr., Cigar Mfg., Davenport.
Sternberg Cigar Mold Mfg. Co., Davenport.
Stock, Aug. C., Cigar Mfg., Ackley.
Stifler, L. C., Cigar Mfg., Waterloo.
Sandleberg Co., Cigar Mfg., Atlantic.
Sartor, W. R., Cigar Mfg., Des Moines.
Schliep, Frank, Cigar Mfg., Mt. Pleasant.
Schliep, Wm., Cigar Mfg., Mt. Pleasant.
Starry, Louis, Cigar Mfg., Monticello.
Strasburger & Loeb, Cigar Mfgs., Oskaloosa.
Sheehan, Dan H., Cigar Mfg., Knoxville.
Schee, John, Cigar Mfg., Algona.
Sheehan, J. D., Cigar Mfg., Keokuk.
Sample Bros.' Cigar Mfg., Keokuk.
Stout & Simpson Cigar Mfg., Independence.
Schwein, John G., Cigar Mfg., Boone.
Solon, J. J., Cigar Mfg., Manchester.
Swanson, J. E., Cigar Mfg., Osage.
Schneider, Adam, Cigar Mfg., Clinton.
Sheetz, W. H., Cigar Mfg., Mason City.
Schusster, Leonard, Cigar Mfg., Dubuque.
Shaffer, Chas., Cigar Mfg., Garden Grove.
Toby & Bickett Cigar Mfg., Albia.
Tausch, F., Cigar Mfg., Rock Rapids.
Towale, Geo. R., Cigar Mfg., Belle Plaine.
Tousley, F. H., Cigar Mfg., Oskaloosa.
Troute, Wm. E., Cigar Mfg., Fort Madison.
Thayer, F. M., & Sons, Cigar Mfg., Mason City.
Webber, Gus A., Cigar Mfg., Council Bluffs.
Walters, Matthew H., Cigar Mfg., Brighton.
Wabb, Louis, Cigar Mfg., Iowa Falls.
Williams, Jacob, Cigar Mfg., Burlington.
Wrang, Henry, Cigar Mfg., Burlington.
Wilkins, Al., Cigar Mfg., Burlington.
Wapello Cigar Co., Emil Frecht, Mgr., Ottumwa.
Whetzel Metzger Cigar Mfg., Cedar Rapids.
Wood, Myron D., Cigar Mfg., Independence.
Welderhold Bros.' Cigar Mfg., Carroll.
Wheeler, Joe, Cigar Mfg., Mystic.
Weise, Wm., Cigar Mfg., DeWitt.
Walters, W. C., Cigar Mfg., Dunlap.
Webber, Michael, Cigar Mfg., Dubuque.
Western Cigar Mfg., Estherville.
Youngerman, W. W., Cigar Mfg., Des Moines.
Young, John F., Cigar Mfg., Burlington.
Zahn, Mrs. W. J., Cigar Mfg., Nevada.
Zimmerman, J., Cigar Mfg., Marengo.
Zimmerlie, Fred, Cigar Mfg., Iowa City.

CLOTHING MANUFACTURERS (FACTORY PRODUCT).

Baker, H. A., Overall Mfg., Sioux City. Bell Bros.' Co., Overalls and Shirts, Dubuque. Benham Garment Mfg. Co., Des Moines. Calhoun, J. W., Shirt Mfg., Ottumwa. Capital City Hat Mfg. Co., Des Moines. Capital City Skirt Mfg., Co., Des Moines. Clark McDaniels Clothing Mfrs., Cedar Rapids. Conner Overalls & Shirt Mfg., Burlington. Davenport Garment Mfg. Co., Davenport. Des Moines Pants Mfg. Co., Des Moines. Des Moines Skirt & Corset Mfg. Co., Des Moines. Edwards Skirt Mfg. Co., Clinton. Epperley Corset Mfg. Co., Missouri Valley. Fort Dodge Overalls Mfg. Co., Fort Dodge. Fort Dodge Overalls Mfg., Co., Fort Dodge. Glover, H. B., Co., Overalls & Shirt Mfg., Dubuque. Harp Clothing Mfg. Co., Le Mars.	Hardsoeg Overalls & Clothing Mfg., Ottumwa. Hanna Overall & Garment Mfg. Co., Oskaloosa. Irwin Phillips Co., Overalls & Shirt Mfrs., Keokuk. Iowa Skirt Mfg. Co., Waterloo. Jones Bros.' Overalls Mfg. Davenport. Jones Bros.' Overalls & Shirt Mfg., Dubuque. Kellner, H. F., Corset Mfg., Cedar Rapids. Keystone Skirt Mfg. Co., Des Moines. Krause & Roberts Overalls Mfrs. Davenport. Lee, W. H., Shirt & Overalls Mfrs., Webster City. McNaill, C. A. Hat Mfg., Des Moines. Mulroney Overall Mfg., Fort Dodge. Myer, Cook & Cuykendahl, Hatters and Mfrs., Dubuque. Osceola Skirt Factory, Osceola. Platt, Buckingham Overalls & Shirts, Dubuque. Smith Skirt Mfg. Co., Red Oak. Smith & Smith, Clothing Mfg. Eldora. Taylor Newell Co., Clothing Mfg., Newton. Tilden Skirt Mfg. Co., Des Moines. Waterloo Skirt and Garment Mfg. Co., Waterloo.
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CLOTHING (RETAIL.)

Armstrong & McClennihan, Retail Clothing, Cedar Rapids. Bear, Ben'n, Clothing, Decorah. Carwahl, D., Retail Clothing, Keokuk. Chicago Clothing Co., Clinton. Dix, S. B., Retail Clothier, Cedar Rapids. Dow Clothing Co., Sioux City. Einstein & Morris Clothing, Clinton. Fagley & Co., Mens' Clothing, Sioux City. Carwahl, D., Retail Clothing, Keokuk. Iowa Clothing Co., Sioux City. Johnson & Aronson, Clothiers and Tailors, Sioux City. Johnson, D. M., Clothing Co., Des Moines. Kerfoot Clothing Co., Ottumwa. Miller & Kline Clothiers and Tailors, Sioux City. McNiel Bros.' Clothing, Boone. Myers, G. L., & Co., Furnishings, Davenport. Oppenheimer, Beeson, Morse Retail Clothing, Oskaloosa.	Pappe Bros.' Clothing Dealers, Sioux City. Plymouth Clothing Co., Fort Dodge. Ringgold, L. B. & Co., Clothing Burlington. Sax, J. B., Clothing Co., Ottumwa. Silberstein Bros.' Clothiers, Davenport. Simon Clothing Co., Des Moines. Solomon, Oscar, Crenshaw & Westcott, Retail Clothing Cedar Rapids. The Utica Clothing Co., I. A. Friedrich, Mgr., Des Moines. Well & Co., Retail Clothing, Keokuk. Western Installment Co., Furnishings, Des Moines. White, George & Co., Wholesale Furnishings, Des Moines. Willner Bros., Retail Clothing, Cedar Rapids. Willner Bros.' Clothing, Dubuque. Willner Bros. Clothing and Tailor, Iowa City. Young Mfg. Co., Clothing and Tailoring, Shenandoah.
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COAL MINE OPERATORS.

Adams County—W. S. Fernwood, Eureka; J. M. Henton, Eureka; Wm. Collins, Carbon; M. Jones, Carbon; Reese & Perks, Carbon; J. F. Wild, Carbon; J. F. Ruth, Carbon; Eclipse Coal Mining Co., Briscoe; Jas. Spargur, Nodaway.	Brazil; Peacock Coal Co., Brazil; Oriental Coal Co., Centerville; Domestic Coal Co., Centerville; Anchor Coal Co., Centerville; Scandinavian Coal Co., Centerville; Dewey Coal Co., Centerville; Hocking Valley Coal Co., Cincinnati; Mendota Coal and Mining Co., Cincinnati; Thistle Coal Co., Cincinnati; Exline Coal Co., Exline; Royal Coal Co., Tabor; Numa Block Coal Co., Seymour; Illinois and Iowa
Appanoose County—Columbia Coal Co., Centerville; Centerville Block Coal Co., Centerville; Brazil Coal Co., Centerville; Phoenix Coal Co., Brazil; Tipton Co-Operative Coal Co.,	

COAL MINE OPERATORS—CONTINUED.

- Coal Co., Ottumwa; Consumers' Coal Co., Cedar Rapids; Big Jo Coal Co., Harkes; F. H. Juckett Coal Co., Cedar Rapids; Peerless Coal Co., Centerville; Egypt Coal Co., Mystic; Arctic Coal Co., Mystic; Acken Coal Co., Mystic; Mystic Coal Co., Mystic; Big Three Coal Co., Mystic; Lodwick Bros. Coal Co., Mystic; McGran Coal Co., Mystic; Orr Bros., Mystic; Diamond Block Coal Co., Mystic; Star Coal Co., Rathbun; Stone Coal Co., Mystic; George Gill, Darby; Manufacturers' Coal and Coke Co., Centerville; Happy Coal Co., Centerville; Star Coal Co., Centerville; Monitor Coal Co., Centerville; Rock Valley Coal Co., Centerville; White Oak Coal Co., Centerville; H. W. Farnsworth, Exline; Superior Coal Co., Jerome; R. Campbell, Brazil.
- Lucas County—Whitebreast Fuel Co. of Illinois, Ottumwa; Big Hill Coal Co., Lucas; Inland Fuel Co., Chariton.
- Monroe County—Consolidation Coal Co., Buxton; Wapello Coal Co., Hiteman; Smoky Hollow Coal Co., Avery; Excelsior Coal Co., Foster; Phillips Fuel Co., Foster; Whitebreast Fuel Co. of Illinois, Ottumwa; Hocking Coal Co., Hocking; Central Coal Co., Albion; Miller Creek Coal Co., Coalfield; Star Coal Co., Albion; White Ash Coal Co., Avery.
- Page County—Johnston & Co., Clarinda; J. W. Berry Coal Co., Clarinda; Winger Bros., Clarinda; L. Vanarsdal, Clarinda.
- Wayne County—Numb, Block Coal Co., Seymour; J. L. Slack, Harvard; E. A. Spies, Promise City; L. Frye, Promise City.
- Taylor County—Tomlinson & Miller, Newmarket; R. Campbell Coal Co., Newmarket; Wm. Browning, Newmarket; Wm. Welch, Newmarket; N. Easter, Newmarket.
- Davis County—Sickle Coal Co., J. M. Sickle, Eldon; Dye Coal Co., G. W. Dye, Eldon; Jordan Coal Co., John Jordan, Eldon; Lunsford Coal Co., A. C. Lunsford, Lunsford.
- Jefferson County—Wm. Hull Coal Co., William Hull, Fairfield; Bates Coal Co., G. W. Bates, Fairfield; Gardener Coal Co., A. Gardener, Fairfield; Tweedy Coal Co., J. Tweedy, Libertyville.
- Keokuk County—Margaret Coal Co., John Donovan, What Cheer; What Cheer Fuel Co., H. D. Baker, What Cheer; Volunteer Coal Co., Thos. Thompson, What Cheer; Grudgings Bros. Coal Co., Dan Grudgings, What Cheer; Maxwell Coal Co., Robt. Maxwell, What Cheer; Graham & Dixon Coal Co., David Graham, What Cheer; Lambert Bros. Coal Co., Ed Spavin, What Cheer; Bell & Teeters Coal Co., Delta; O. W. Oliver Coal Co., O. W. Oliver, Delta; M. Fisher Coal Co., Martin Fisher, Delta; H. Murray Coal Co., H. Murray, What Cheer.
- Mahaska County—Consolidation Coal Co. No. 9, B. C. Buxton; Lost Creek Coal Co. No. 2, J. Trimble, Lost Creek; Regal Coal Co., Dan Reigel, Oskaloosa; Whitebreast Fuel Co. No. 28, Evan Reese, Pekay; Garfield Coal Co. No. 2, J. H. Ramsay, Oskaloosa; American Coal Co., No. 7, W. T. Phillips, Evans; Oskaloosa Coal and Mining Co., John Ramsay, Beacon; Eveland Coal Co., John Price, Eveland; Rex Fuel Co., C. Durfey, Bussey; Morrow Coal Co., George Morrow, Oskaloosa; Black Diamond Coal Co., George Carlon, Oskaloosa; Crescent Coal Co., James Chew, White City; Spring Creek Coal Co., J. H. Smith, Oskaloosa; Burr Oak Coal Co., W. T. Phillips, Olivet; Coryell & Son Coal Co., F. D. Coryell, Eddyville; Kennebec Coal Co., A. Love, Muchaknock; Atwood Coal Co., John Reynolds, Atwood; Barrowmen & Oakley Coal Co., R. Barrowmen, Oskaloosa; Schultz Coal Co., F. Schultz, Oskaloosa; Evans Coal Co., Mr. Evans, New Sharon; Williams Coal Co., W. F. Williams, New Sharon; Carey Coal Co., M. Carey, Rose Hill; Raven Coal Co., A. B. Little, Oskaloosa; Sowden Coal Co., J. H. Sowden, Oskaloosa; Patterson & Son Coal Co., Wm. Patterson, Leighton; Frey Bros. Coal Co., Leighton.
- Marion County—Buwalda Bros. Coal Co., J. Buwalda, Pella; Dielman Coal Co., J. R. Dielman, Pella; Hollingsworth Coal Co., E. Hollingsworth, Otley; Youkon Coal Co., J. B. Mezlar, Otley; Wild Rose Coal and Mining Co., G. W. Rupe, Morgan Valley; Dunreath Coal Co., W. W. Sulley, Dunreath; Booth Coal Co., H. Booth, Knoxville; Hayes Coal Co., J. T. Hayes, Knoxville; Hawkeye Coal Co., L. E. Phillips, Knoxville; Monmouth Coal Co., J. A. J. Powers, Hamilton; Southeastern and Iowa Fuel Co., R. D. Adey, Hamilton; Miller Coal Co., Wm. Miller, Knoxville; Cedar Creek Coal Co., J. T. Jones, Hamilton; Price Coal Co., J. R. Price, Otley.
- Van Buren County—Ratcliff Coal Co. No. 1, H. L. Ratcliff, Douds; Ratcliff Coal Co. No. 2, H. L. Ratcliff, Douds; Finley Coal Co., J. A. Finley, Douds; Henry Knott Coal Co., H. Knott, Farmington; Sherrick & Alfrey Coal Co., O. S. Alfrey, Farmington; Cahill Coal Co., P. Cahill, Farmington; Carson Coal Co., Wm. Carson, Douds.
- Wapello County—Phillips Fuel Co. No. 5, A. J. Erskins, Ottumwa; Anchor Coal Co., W. B. Williams, Laddsdale; Carbon Coal Co., L. L. Lodwick, Willard; Bear Creek Coal Co., Jacob Allen, Bear Creek; South Ottumwa Coal Co., G. W. Grooms, Ottumwa; Star Coal Co., Wm. Dempster, Ottumwa; Spring Hill Coal Co., Chas. Oleson, Ottumwa; Excelsior Coal Co., S. G.

COAL MINE OPERATORS—CONTINUED.

- Styre, Ottumwa; Risher Coal Co., R. R. Risher, Ottumwa; Illinois and Iowa Fuel Co., Jas. Shevlin, Keb; Roseland Coal Co., A. D. Lumsden, Ottumwa; Brown Bros. Coal Co., C. W. Brown, Keb; John Daniels Coal Co., John Daniels, Ottumwa.
- Boone County**—Boone Valley Coal & R. R. Co. No. 1, Robert Kennedy, Fraser; Boone Valley Coal & R. R. Co. No. 3, Robert Kennedy, Fraser; Boone Valley Coal & R. R. Co. No. 5, Robert Kennedy, Fraser; Boone Valley Coal & R. R. Co. No. 6, Robert Kennedy, Fraser; Boone County Coal Co., Wm. Benson, Boonsboro; W. D. Johnson Coal Co., W. D. Morgan, Boonsboro; Crowe Coal Co., Wm. Crowe, Boonsboro; Risher Coal Co., T. W. Hughes, Boonsboro; Rodgers Coal Co., Geo. Rodgers, Incline; Wilson Coal Co., Jas. Wilson, Pilot Mound; McCormick Coal Co., Luther; Wiscup, Luther.
- Dallas County**—Griscoe Coal Co., Thos. Grisco, Madrid; Knox Coal Co., Wm. Knox, Madrid; Vernon Coal Co., G. W. Mongin, Madrid; Reese Bros. Coal Co. No. 1, W. J. Reese, Madrid; Reese Bros. Coal Co. No. 2, W. J. Reese, Madrid; Hutchison Coal Co., W. C. Hutchison, Dawson.
- Greene County**—Willow Grove Coal Co., H. A. McElhaney, Angus, Goodwin Coal Co., Thos. Goodwin, Grand Junction; Buckeye Coal Co., Mike Fifeh, Angus; Ditchburn Coal Co., Robt. Ditchburn, Angus; Thomas Coal Co., H. L. Thomas, Angus; Keystone Coal Co., W. M. Bennett, Angus.
- Guthrie County**—Batschlet & Merchant Coal Co., John Merchant, Panora; King & Stoddard Coal Co., E. E. Stoddard, Bayard; Morris & Perkins Coal Co., Thos. Morris, Fansler; Mallon Coal Co., M. Mallon, Fansler; Scott Coal Co., W. H. Scott, Fansler; Cooper Coal Co., J. C. Cooper, Fansler; Sipe & Mansell Coal Co., John Mansell, Fansler; Clipper Coal Co., Wm. Merchant, Fansler; Reese Coal Co., David Reese, Panora; Paul Coal Co., Jas. Paul, Fansler; Butler Coal Co., T. J. Butler, Fansler; Raner Coal Co., C. C. Raner, Fansler; Chapple Coal Co., Richard Chapple, Jamaica.
- Jasper County**—Consolidated Coal Co. No. 6, George Richards, Colfax; Colfax Consolidated Coal Co. No. 7, George Wilson, Colfax; Barret Coal Co., J. W. Barret, Colfax; French Coal Co., E. P. French, Newton; Carson Bros. Coal Co., A. Carson, Newton; Snooks Coal Co., Thos. Snooks, Newton; Lister Coal Co., Alfred Lister, Newton; Gunther Coal Co., John Gunther, Colfax; Cavet Coal Co., John Cavet, Vandalla; Bruce Coal Co., John Bruce, Monroe; Shaw Coal Co., Gilbert Shaw, Draper; John McConeghey, John McConeghey, Draper; Worrick Bros. Coal Co., Jas. Worrick, Colfax.
- Polk County**—Des Moines Coal Co., Chas. Morris, Des Moines; Saylor Coal Co., Thos. Carpenter, Des Moines; Smith-Lowe Coal Co. No. 2, E. C. Smith, Des Moines; Smith-Lowe Coal Co. No. 3, E. C. Smith, Des Moines; Smith-Lowe Coal Co., No. 4, E. C. Smith, Des Moines; Norwood Coal Co. No. 1, Jos. Norwood, Des Moines; Norwood Coal Co. No. 2, Jos. Norwood, Des Moines; Gibson Coal Co. No. 4, John Gibson, Des Moines; Maple Grove Coal Co., Charles Swanson, Des Moines; Bloomfield Coal Co., George Yarn, Des Moines; Diamond Joe Coal Co., John Shuler, Runnells; Keystone Coal Co., E. M. Gray, Des Moines; Eagle Coal Co., G. M. Holmes, Des Moines; Midway Coal Co., Charles Carlson, Des Moines; West Riverside Coal Co., Jos. Jaskson, Des Moines; Flint Brick and Coal Co., Mike Quinn, Des Moines; Center Coal Co., Isaac Evans, Des Moines; Oak Park Coal Co., Edward Herdman, Des Moines; O. K. Coal Co., L. M. Mann, Des Moines; Glenwood Coal Co., Caleb Johns, Des Moines; Elko Coal Co., Thomas Beck, Des Moines; Capital Coal Co., Daniel Johns, Des Moines; Enterprise Coal Co., G. E. Walters, Enterprise; Madison Coal Co., Wm. Madison, Des Moines; Evans Bros. Coal Co., B. Evans, Des Moines; Avon Coal Co., J. W. Hammond, Avon; McKinney Coal Co., A. McKinney, Runnells; Newman Coal and Brick Co., Chas. Newman, Hastie; Merchant Coal Co., Wm. Merchant, Commerce; Bertrand & Tilton, John Tilton, Commerce.
- Scott County**—Hanlon Coal Co., John Hanlon, Jamestown; Langwith Coal Co., E. T. Langwith, Jamestown; Sass Bros. Coal Co., Wm. Sass, Jamestown; Couch Coal Co., Theo. Couch, Buffalo; Long Coal Co., L. Long, Jamestown; Clintner Coal Co., M. H. Clintner, Jamestown; Buchmeyer & Carlon Coal Co., John Buchmeyer, Jamestown.
- Story County**—Story County Coal Co., Wm. Benson, Summit; Zenoville Coal Co., J. York, Gilbert.
- Webster County**—Crooked Creek Coal Co. No. 5, F. E. Wilson, Webster City; Pleasant Valley Coal Co., Jerry Dawson, Kalo; Gleason Coal Co., John Gleason, Coalville; Corey Coal Co., Reese Stephens, Lehigh; Craig & Dawson, Jerry Dawson, Kalo; Daily Coal Co., M. Z. Williams, Lehigh; Collins Coal Co., E. W. Collins, Coalville; Johnson Coal Co., W. J. Johnson, Kalo; Irwin Bros., Thos. Irwin, Kalo; Owen Coal Co., Frank Owen, Fort Dodge; Morris & McClure Coal Co., J. H. Orres, Lehigh; Upper Valley Coal Co., M. C. Kellogg, Lehigh; Martin Coal Co., Charles Martin, Moorland; Timmon's Coal Co., Hugh Timmons, Fort Dodge; Bennett Coal Co., S. Bennett, Kalo;

COAL MINE OPERATORS—CONTINUED.

Calford Coal Co., P. Lochray,
Moorland; Allen Coal Co., T. J.
Allen, Moorland; Pence Coal Co.,

H. Pence, Lehigh; Starberry Coal
Co., J. Starberry, Kalo.

COAL, WOOD, ICE, LIME AND CEMENT DEALERS.

Abel Lime & Cement Co., Davenport.
Allen & Ingwersen, Coal and Wood,
Clinton.

Baker, W. J., Coal, Wood and Ice
Dealer, Ottumwa.

Blake, W. R., Lumber and Coal,
Eagle Grove.

Brown & Son, Grain and Coal, Britt.
Burlington Fuel Co., Burlington.

Chisholm & Evans Co., Coal and Ice,
Keokuk.

Cullavan, George, Ice Co., Missouri
Valley.

Conway, E. A., Coal Co., Wholesale
and Retail, Sioux City.

Cummings, W. W., Ice and Coal
Dealer, Ottumwa.

Des Moines Fuel & Lime Co., Des
Moines.

East Davenport Fuel & Lime Co.,
Davenport.

Greve Hansen & Co., Wood and Kind-
ling, Clinton.

Harper, L. C. & Co., Coal Dealers,
Burlington.

Hawkeye Fuel & Supply Co., Sioux
City.

Hooper, E. D., & Son, Ice, Cedar
Rapids.

Hubbard, C. P., Ice, Wholesale and
Retail, Cedar Rapids.

Humboldt Flour & Feed Co., Hum-
bolt.

Iowa Fuel and Feed Co., Council
Bluffs.

Kelley Bros.' Sand, Gravel, Lime and
Ice, Burlington.

Lane & Moore, Lime Stucco and
Cement, Marathon.

Leighan Grain and Ice Co., Dunlap.
Marshalltown Coal and Ice Co., Mar-
shalltown.

Mississippi Coal and Ice Co., Keokuk.
Mulgrew, T. J., Coal Wood & Ice,
Dubuque.

Northwestern Coal and Lime Co.,
Sioux City.

Rogers, J. H., Ice Dealer, Ottumwa.
Sioux City Lumber & Coal Co., John
Patto, Mgr., Sioux City.

Smith & Oaks, Coal and Wood,
Clinton.

Spicer, D. H. Co., Ice and Coal,
Hedrick.

Taylor, C. E., Blacksmith and Ice
Dealer, Emmetsburg.

Tucker, Geo. S., Ice and Wood,
Keokuk.

COFFIN AND CASKET MANUFACTURERS.

Anti-Septic Paper Casket Co., Mis-
souri Valley.

Des Moines Casket & Coffin Mfg. Co.,
Des Moines.

Dubuque Casket Mfg. Co., Dubuque.

Embalming Burial Case Co., Bur-
lington.

Iowa Coffin Co., Dubuque.
Smith & Schmidt, General Coffin
Trimmers, Dubuque.

Waterloo Casket Co., Waterloo.

COMMERCIAL AND TELEGRAPH AGENTS.

A. D. T. Co., C. F. Paterson, Sup't.,
Chicago.

American District Telegraph Co., Des
Moines.

American District Telegraph Co.,
Sioux City.

Bra'streets' Commercial Agency, Des
Moines.

Bradstreet Co., Commercial Agency,
Dubuque.

Bradstreet Commercial Agency, Sioux
City.

Dunn, R. G., Commercial Agency,
Cedar Rapids.

Dunn, R. G., Commercial Agencies,
Davenport.

Dunn, R. G., Commercial Agency, Des
Moines.

Dunn, R. G., Commercial Agency, Du-
buque.

Dunn, R. G., Mercantile Co., Sioux
City.

Polk R. F. Directory Co., Des Moines.
Postal Telegraph Co., C. F. Fox,
Supt., Des Moines.

Western Union Telegraph Co., F. H.
Tubbs, Supt., Chicago.

CONTRACTORS AND BUILDERS.

Ackerman, C. W., Contractor and
Builder, Fort Dodge.

Anderson & Sweltzer, Contractors and
Builders, Sioux City.

Atkinson, John F., Contractor, Mar-
shalltown.

Austin, A. H., Bridge Builder, Web-
ster City.

Baird, Contractor & Builder, Mason
City.

Bradley, H. S., Contractor and Plan-
ing Mill, Rock Rapids.

CONTRACTORS AND BUILDERS—CONTINUED.

Brereton, W. H., Contractor and Brick Mfg., Des Moines.	Keefe, J. F., Contractor and Builder, Sioux City.
Brune, H., Painter and Dec. Contractor, Burlington.	Kirk, J. M., Contractor and Builder, Montezuma.
Butcher & Story, Contractors and Builders, Des Moines.	Koltzau & Myers Contractors and Builders, Davenport.
Babue, F. X. & Sons, Contractors and Builders, Sioux City.	Mardis, Alex, Contractor and Builder, Corydon.
Benson & Marxer, Contractors and Birmass, John B., Contractor and Builder, Davenport.	Maine, Jas. & Son, Contractors and Builders, Des Moines.
Christy, C. C. Contractor, Des Moines.	Mattison, Williams & Co., Contractors and Builders, Des Moines.
Lelly Stone and Sidewalk Co., Cedar Rapids.	McGorriak, J. B., Contractor and Builder, Des Moines.
Columbia Fireproofing Co., Des Moines.	Metzell Bros., Contractors and Builders, Sioux City.
Comoli, P. P., Cement Sidewalk Contractor, Sioux City.	Mitchell, W. F., & Co., Contractors and Builders, Des Moines.
Corrigan & Co., Contractors, Cedar Falls.	Moe & Winter, Contractors and Builders, Sioux City.
Coults, R. G., Contractor and Builder, Grinnell.	Morey, D. F., Brick & Construction Co., Ottumwa.
Dawson & Co., A. U., Contractors, Mason City.	Naramore Cement Sidewalk Contractors, Mason City.
Doherty Contractor & Construction Co., Cedar Rapids.	Osborne & Tolman Cement Sidewalk Mfgs., Iowa City.
Ellsworth & Jones, Real Estate, etc., Contractors and Builders, Iowa Falls.	Rudd & Chase Contractors and Bridge Builders, Corydon.
Garner Construction Co., Garner.	Sheehan, Dan C., Cement Sidewalks, Independence.
Golding, Ed., Contractor and Builder, Bedford.	Sheets & Traydor Architects and Contractors, Iowa City.
Guarantee Cement Co., Sidewalks, Cedar Rapids.	Stonewood & Son Contractors and Builders, Des Moines.
Hallet & Rawson, Architects and Contractors, Des Moines.	Tri-City Construction Co., Contractors and Builders, Davenport.
Hanlon, E. J., Contractor and Builder, Sioux City.	Tri-City Electric Co., Contractors, Des Moines.
Hansen Bros., Contractors and Builders, Sioux City.	Tri-City Electric Co., W. B. Ball, Mgr., Davenport.
Hawkeye Electric Co., Sioux City.	Tusant, J. E., Contractor, Des Moines.
Hayden & McClain, Contractor and Builder, Burlington.	Welts, Charles, Contractor and Builder, Des Moines.
Howe, J. E., Carpenter and Contractor, Muscatine.	Wichham, E. A., Contractor and Builder, Council Bluffs.
Hunnell & Nagus, Contractors and Builders, Des Moines.	Younglove Boggus & Co., Contractors, Mason City.
Iowa Construction Co., Contractors and Builders, Creston.	Zitterell, W. J., General Contractor, Webster City.
Iowa Electric & Construction Co., Des Moines.	

CORNICE MANUFACTURERS AND GALVANIZED IRON WORKS.

Burns, W. H., Cornice and Sheet Metal Mfg., Sioux City.	Marcsh Bros., Cornice Mfgs., Iowa City.
Clark, J. B., & Co., Gal. Iron and Cornice Mfg., Des Moines.	Parker, Geo. W., Cornice and Roofing Mfg., Clinton.
Grissell, John P. Cornice Mfg. Co., Cedar Rapids.	Reimmers, Peter A., Cornice Mfg., Davenport.
Hipwell, Charles G., Cornice Mfg., Davenport.	Scheutz, C. M., Cornice and Sheet Ceiling Contractor, Sioux City.
Houser, M. W., Cornice Mfg., Cedar Rapids.	St. John & Barquist Cornice Mfg. Co., Des Moines.
Horne & Co., Cornice Mfg., Keokuk.	Vinton Steel Works, Vinton.
Marshalltown Cornice Co., Marshalltown.	Waterloo Cornice Works, Waterloo.
	Williams' Sheet Metal Works, Mason City.

CRACKER AND CANDY MANUFACTURES.

Albee Bakery Nat'l Biscuit Co., Dubuque.	Arctic Ice Cream Co., Des Moines.
Algona Ice Cream & Candy Mfg., Algona.	Baker, M. M., & Co., Candy Mfgs., Des Moines.
	Burke Candy Mfg. Co., Keokuk.

CRACKERS AND CANDY MANUFACTURES—CONTINUED.

Crescent Macaroni Mfg., Davenport.
Continental Biscuit Mfg. Co., Des Moines.
Cedar Rapids Candy Mfg. Co., Cedar Rapids.
Continental Biscuit Mfg. Co., Cedar Rapids.
Clinton Copeland Candy Mfg. Co., Burlington.
Dickson Graff, Candy Mfg., Waterloo.
Fellner Candy Mfg. Co., Marshalltown.
Forney, W. R., Candy Mfg., Marshalltown.
Fort Dodge Candy Mfg. Co., Fort Dodge.
Fort Dodge Cracker Mfg. Co., Fort Dodge.
Greene Candy Mfg. Co., Oskaloosa.
Gardner & Gould Candy Mfg., Burlington.
Heywood Candy Mfg., Des Moines.
Hall, W. T., & Co., Candy Mfg., Ottumwa.
Hoefert, J. L., Candy Mfg., Burlington.

L. Iten & Sons, Cracker Mfg. Clinton.
Lawther, Wm. & Co., Candy Mfg., Dubuque.
Marshalltown Cracker Mfg. Co., Marshalltown.
Maehr, Frank, Candy Mfg., Davenport.
McNeil's Candy Kitchen, Clinton.
National Biscuit Mfg. Co., Davenport.
National Biscuit Co., J. M. Woodward, Mgr., Council Bluffs.
National, The Biscuit Co., Burlington.
Purity Candy Co., Mfgs., Des Moines.
Roddewig, Schmidt Candy Mfgs., Davenport.
Reimers & Fernald Co., Cracker Mfgs., Davenport.
The National Biscuit Co., Sioux City.
Underwood Candy Mfg. Co., Pekay.
Woodward, John G., Confectionery Mfgs., Council Bluffs.
Waller & Daily Ice Cream Mfgs., Charles City.

CREAMERIES EMPLOYING OVER ONE PERSON.

Adair County—Blue Grass Creamery, Fontanelle.
Allamakee County—Calhoun Creamery Co., Church; Postville Co-Op. Creamery Co., Postville.
Black Hawk County—The Palmer Hubbard Co., Waterloo.
Bremer County—The Clinger Creamery, Clinger; The Wisconsin Condensed Milk Co., Waverly.
Buchanan County—Jesup Creamery Co., Jesup; The Palmer Hubbard Co., Independence; The Palmer Hubbard Co., Winthrop.
Butler County—The Clarksville Creamery Co., Clarksville.
Carroll County—The Manning Creamery Co., Manning.
Chickasaw County—Deerfield Creamery, Deerfield; Fredericksburg Butter Factory, Fredericksburg; The Nashua Creamery, Nashua; The New Hampton Creamery, New Hampton; The Farmers' Co-Op. Association, Nashua.
Clayton County—The Lauana Farmers' Creamery Co., Luana; Strawberry Point Farmers' Creamery Association, Strawberry Point; The J. D. Bickel Produce Co., McGregor.
Cerro Gordo County—The J. D. Bickel Produce Co., Mason City.
Crawford County—The Denison Creamery Co., Denison.
Davis County—The Yorkshire Creamery Co., Bloomfield.
Delaware County—The Delaware Creamery Co., Delaware; The Manchester Co-Op. Creamery, Manchester; The Masonville Co-Op. Hubbard Co., Ryan.
Dubuque County—The Dubuque Butter and Milk Co., Dubuque; S. T. Wadley Butter Co., Dubuque.
Floyd County—Rockford Co-Op. Dairy Association, Rockford.

Fayette County—Brush Creek Farmers' Creamery, Arlington; Claremont Creamery Co., Claremont.
Grundy County—Fredsville, Co-Op. Co., Cedar Falls.
Hamilton County—Randall Farmers' Creamery Co., Randall.
Hardin County—Alden Creamery Co., Alden; The Concord and Scott Creamery, Radcliffe.
Howard County—Farmers' Co-Op. Creamery Co., Chester.
Iowa County—Ladora Creamery Co., Ladora.
Jones County—The Diamond Creamery Co., Monticello.
Linn County—The Cedar Rapids Butter and Milk Co., Cedar Rapids; The Cedar Valley Creamery Co., Cedar Rapids.
Marshall County—The Nerva Valley Creamery Co., Clemens.
Mitchell County—Osage Co-Oper. Creamery Co., Osage; Rock Creek Co-Op. Creamery Association, Me-roa; The Farmers' Co-Op. Creamery Association, Orchard.
Page County—The Clarinda Poultry, Butter and Egg Co., Clarinda.
Polk County—The Schermerhorn-Shotwell Co., Des Moines; The Waterloo Creamery Co., Des Moines; The Iowa Dairy Co., Des Moines.
Story County—The Roland Farmers' Creamery Co., Roland.
Taylor County—The Bedford Creamer Co., Bedford.
Winnetago County—Lake Mills Creamery Co., Lake Mills.
Winnebleshiek County—The Nordness Creamery Co., Nordness.
Woodbury County—The Hanford Hazlewood Co., Sioux City.
Wapello County—The Yorkshire Creamery Co., Ottumwa.

RENOVATED BUTTER FACTORIES.

Andrews, Wood & Co., Rockwell City.	Iowa Pure Butter Co., Keokuk.
Ellingson, E. M. Co., Des Moines.	MacRae Bros., Des Moines.
Emery & Son, Washington.	Smith Produce Co., Redfield.
Hathaway, N. R., Sioux City.	Stevens Co., Spirit Lake.
Humphrey, J. L., Jr., Humeston.	Keota Produce Co., Keota.

CREAMERY SUPPLIES, MANUFACTURES AND DEALERS.

Adams, H. H., Creamery Supplies, Decorah.	Hackett & Dally, Creamery Supplies, Waterloo.
Creamery Package Mfg. Co., S. 6th Street, Des Moines.	Iowa Dairy Separator Co., Waterloo.
Creamery Package Supply Mfg. Co., Waterloo.	Moseley & Pritchard, Dairy Appar- atus, Clinton.
Cushman, Ed. S., Cream Separator Mfg., Centerville.	Mower Hardware Co., Creamery Sup- plies, Cedar Rapids.
Dalglish, W. S., Contractor and Build- er, Burlington.	World Cream Separator Co., Council Bluffs.
Holmsbelm, C. & Son, Creamery Sup- plies, Waverly.	Waterloo Creamery Package Mfg. Co., Waterloo.

CROCKERY AND GLASSWARE (WHOLESALE AND RETAIL).

Brinsmaid & Co., Crockery and Glass- ware, Des Moines.	Little, C. H., & Co., Crockery and Glassware, Dubuque.
Casey, S. E., Queensware, Keokuk.	Maurer, W. A., Crockery and Glass- ware Co., Council Bluffs.
Cook & Lawrence, Crockery and Glassware Co., Cedar Rapids.	Prugh, J. K., Crockery and Glass- ware, Sioux City.
Heinrich Crockery Co., Davenport.	Poole, Marion, B., Queensware, Clinton.
Lorenzen, Jens, Crockery Co., Daven- port.	

CUTLERY MANUFACTURES.

Fox Cutlery Mfg. Co., Dubuque.	Lang Cutlery Co., Cedar Rapids.
Iowa Cutlery Works, Cedar Rapids.	

DRUGS (WHOLESALE AND RETAIL).

Axt Drug Co., Fort Madison.	Oskaloosa Drug Co., Oskaloosa.
Churchill Drug Co., Wholesale, Bur- lington.	Olney & McDaid, Wholesale Drugs, Clinton.
Edgerley, J. W., Wholesale Drugs, Ottumwa.	Robinson Drug Co., Burlington.
Frank & Hadle Co., Drugs, Daven- port.	Rogg, C. W., Drugs, Glass, Paints, etc., Des Moines.
Green & Bentley Drug Co., Oskaloosa.	Sherman, M. E., Drug Co., Des Moines.
Hornick Hess & Moore, Wholesale Drugs, Sioux City.	Talbott, A. D., Drugs, Grinnell.
Hansen Drug Co., Wholesale and Re- tail Co., Des Moines.	Treydor Drug Co., Iowa City.
Harle, Haas Co., Wholesale Drugs, Council Bluffs.	Van Allen Drug Co., Clinton.
Nauman Held Drug Co.	Wangler Drug Co., Waterloo.
Nadler, Frank Co., Wholesale and Re- tail Drugs, Davenport.	Wittle, John H., Druggist, Burlington.
	Warzinger & Smith, Drugs, Bur- lington.
	Wangler Bros. & Todd, Wholesale Drugs, Waterloo.

DRY GOODS AND GENERAL MERCHANDISE (WHOLESALE AND RETAIL.)

Allison Bros. & Co., General Mds., Cherokee.	Barret, M. & Sons, General Mdse., Dunlap.
Bailey, M. C., & Son, Dry Goods, New Hampton.	Bashara & Co., Dry Goods, Cedar Rapids.
Bauldauf, Samuel, Dry Goods Co., Oskaloosa.	Beckman, Frank & Co., Dry Goods, Burlington.
Baunatyne & Lay, Dry Goods, Mar- shalltown.	Bee Hive Co., General Mdse., Mar- shalltown.

DRY GOODS AND GENERAL MERCHANDISE (WHOLESALE AND RETAIL—
CONTINUED.

- Bee Hive Department Store Dubuque.
Beno, John, Gen. Mdse., Council Bluffs.
Benson Bros.' Retail Dry Goods, Dubuque.
Bentz, James, Dry Goods Co., Burlington.
Black, James, Dry Goods, Waterloo.
Blotcky Bros.' Department Store, Des Moines.
Blotcky, Joseph & Son, General Mds., Onawa.
Bowman Bros.' General Mdse., Washington.
Bremner & Heddens Dry Goods, Charles City.
Brown Bros.' General Mds., Storm Lake.
Burleson Dry Goods Co., Webster City.
Capper & Shaffer General Mds., Elgin.
Centerville Dry Goods Co., F. M. Drake, Centerville.
Cheney Dry Goods Co., Fort Dodge.
Chicago Dry Goods Co., Malvern.
Christensen Bros.' Co., General Mds., Atlantic.
Colfax Mercantile Co., Colfax.
Consolidated Mercantile Co., Mystic.
Crall, J. B., Dry Goods, Washington.
Creamer, H. N., Dry Goods, Cedar Rapids.
Cullen, S. C., & Co., Gen. Mdse., Ottumwa.
Davidson Bros.' Gen. Mdse., Sioux City.
Dearhorn, J. & Son, Gen. Store and Stone Quarry, Stone City.
Dent, A. E., Dry Goods, Chariton.
Denecke, C. Dry Goods, Cedar Rapids.
Dockstader, C. B., & Co., Gen. Mdse., The Fair Store, Des Moines.
Donelan, W. J. & Co., Gen. Mdse., Ottumwa.
Downs, Levi, Dry Goods, Atlantic.
Davies Dry Goods, Mason City.
Eastman, G. W., Gen. Mdse., Winterset.
Ehardt, Joseph, General Merchandise, Fort Madison.
Esch Bros.' National Importing Co., Dyersville.
Fair Store The, General Merchandise, Cedar Rapids.
Franchere & Franchere, Gen. Mdse., Cedar Rapids.
Gaines Bros.' General Merchandise, Elliott.
Gates, Frank Gates, Gen. Mdse., Fort Dodge.
Glaudville Co., Dry Goods, Mason City.
Goddard, C. M., Dry Goods, Decorah.
Gode, Henry, General Mdse., Marengo.
Goldstone, N. L., Dry Goods, Wholesale, Des Moines.
Hanger, K. I., Gen. Mdse., Decorah.
Harned & Mauer Department Store, Davenport.
Harrigan, J. F., Department Store, Marshalltown.
Harris, Frankel, Emery Dry Goods Co., Des Moines.
Haas & Phulager & Co., Dry Goods, Elora.
Hennessey, F. D., Gen. Mdse., Sioux City.
Hill Mercantile Co., Davenport.
Hill Mercantile Co., Dubuque.
Hoyt, C. J., Dry Goods, Marshalltown.
Hummer, Geo., Mercantile Co., Iowa City.
Iowa Mercantile Co., Newton.
Jandt, H. A., Wholesale Dry Goods, Sioux City.
Jones, W. A., General Mdse., Storm Lake.
Johnson, G. E., Gen. Mdse., Indianola.
Kerndt, C. & Bros., General Mdse., Lansing.
Kerberg, C. N. & Co., Gen. Mdse., Le Mars.
Kolek, Richard, Wholesale Notions, Dubuque.
Kime, W. C. & Co., Gen. Mdse., Storm Lake.
Lane, C. W. & Co., General Mdse., Centerville.
Larsen, Iver, Dry Goods, Decorah.
Larsen Dry Goods Co., Fort Dodge.
Larsen Swan Dry Goods Co., Sioux City.
Lawrence, Thomas, Gen. Mdse., Belle Plaine.
Leader Dry Goods Co., Ottumwa.
Lee & Benedict Dry Goods, Marshalltown.
Levich, Simon, General Mdse., Onawa.
Levit, James & Co., Dry Goods, Dubuque.
Lily, Ben E., Dry Goods, Muscatine.
Lowry C. & Son, Dry Goods, Boone.
Loring, F. W., & Noble Co., Gen. Mdse., Sac City.
Mandelbaum Dry Goods House, Des Moines.
Martin J. & Son, Merchandise, Ackley.
Martin Dry Goods Co., Cedar Rapids.
Martin, T. S., Dry Goods & Gen. Mdse., Sioux City.
McCullough, J. N., Dry Goods, Chariton.
McMinn, J. H. & Co., Gen. Mdse., Grinnell.
McColm Dry Goods Co., Muscatine.
Miller, W. D., Dry Goods, Washington.
Morrell, T. C., Dry Goods, Red Oak.
Newberry Mercantile Co., Estherville.
Nisson & Jacobsen, General Mdse., Clinton.
Oppenheimer Department Store, Iowa Falls.
Oransky, L., Gen. Mdse., Estherville.
Oskaloosa Dry Goods Co., Oskaloosa.
Palmer's Department Store, Chariton.
Parker, T. W., Furnishing Goods, Dubuque.
Parker, Archie M., Dry Goods, Marshalltown.
Pelletier Bros.' Dry Goods & Gen. Mdse., Sioux City.
Petersen, J. H. & Co., Gen. Mdse., Davenport.
Phelan, J. F., Dry Goods and Gen. Mdse., Sioux City.
Phillips & Scase Dry Goods, Ottumwa.
Reid & Conger Dry Goods and Carpets, Clinton.
Reiss, G. E., New York Dry Goods Store, Grinnell.
Reps & Jungk Retail Dry Goods, Cedar Rapids.
Ringheim, H. E., Gen. Mdse., Nevada.

**DRY GOODS AND GENERAL MERCHANDISE (WHOLESALE AND RETAIL)—
CONTINUED.**

Rickenberg, J. H. & Co., Dry Goods, Boone.	The Belmont & Pfeiffer Dry Goods Co., Oskaloosa.
Rise & Bros., Retail Dry Goods, Dubuque.	The F. M. Batterson Co., Dry Goods, Muscatine.
Robinson & Pulzer, Gen. Mdse., Ida Grove.	The Emerson Dep't store, Gen. Mdse., Davenport.
Royal A. Adams, Mfg. & Gen. Mdse. Co., Albia.	The Fair Store, Retail Dry Goods, Dubuque.
Seitz Bros., Dry Goods, Dubuque.	The Hub, H. W. Beebe, Gen. Mdse., Emmetsburg.
Schramm, J. S. & Co., Retail Dry Goods, Burlington.	Thompson & Son, Retail Dry Goods, Dubuque.
Shenck, Mrs. Louisa Dry Goods, Keokuk.	Thorne, J. C., Dry Goods, Fairfield.
Shipley, W. B. & Co., Mdse., Iowa Falls.	Towle & Spreeter Dry Goods, Clinton.
Silje & Gooseman General Mdse., Elkader.	Wapello Dry Goods House, Wapello.
Spot Cash Department Store, Boone.	Weiss The, Dry Goods Co., Fort Dodge.
Starrett Bros., Department Store, Spencer.	Weldon, W., Gen. Mdse., Iowa Falls.
Steffin, August, Dry Goods and Gen. Mdse., Davenport.	Western Supply Co., Marshalltown.
Stone, J. A., Gen. Mdse., Grinnell.	White, A. B., General Store, Humboldt.
Strub, H. A. & Co., Dry Goods, Iowa City.	White & Watson Dry Goods, Mason City.
Sullivan & Staper, Retail Dry Goods, Dubuque.	Wilkins Bros. Dry Goods Co., Des Moines.
Sullivan & Auwerder, Dry Goods, Keokuk.	Wilkinson & Co., Dry Goods, Keokuk.
Taft, John H., Dry Goods, Cedar Rapids.	Wormley, Philo Co., Dry Goods Co., Keosauqua.
Taylor, W. K., Dry Goods, Cedar Rapids.	Vosburg, W. H. & Co., Gilman.
	Yunker Bros., Dry Goods & Gen. Mdse., Des Moines.
	Yunker, M. M., Dry Goods, Keokuk.

DYE WORKS.

Bervid, Frank, Parlor City Dye Works, Cedar Rapids.	Des Moines Steam Dye Works, Des Moines.
Boston Steam Dye Works, T. E. Mulholland, Cedar Rapids.	Iowa State Steam Dye and Cleaning Co., Davenport.
City Steam Dye Works, Iowa City.	Sioux City Dye Works, Sioux City.
	Twin City Dye Works, Council Bluffs.

FIRE AND LIFE INSURANCE COMPANIES.

Anchor Fire Insurance Co., Des Moines.	Farmers Insurance Co., Cedar Rapids.
Capital Insurance Co., Des Moines.	Federal Life Association, Davenport.
Des Moines Fire Insurance Co., Des Moines.	Iowa State Insurance Co., Keokuk.
Des Moines Life Insurance Co., Des Moines.	Merchants & Bankers Insurance Co., Des Moines.
Equitable Life Insurance Co. of Iowa, Des Moines.	Register Life Insurance Co., Davenport.
Fidelity Fire Insurance Co., Des Moines.	Royal Union Insurance Co., Des Moines.
	State Insurance Co., Des Moines.
	The Bankers Life Insurance Association, Des Moines.

FLORISTS, NURSERIES AND SEEDS.

Berry Seed Co., Clarinda.	Glasser, August, Florist, Dubuque.
Bur, J. N. & Co., Wholesale Seed Co., Burlington.	Hill City Greenhouse & Nursery, Forest City.
Capital City Nursery, C. L. Watrous, Mgr., Des Moines.	Hummell, John W., Nursery, Monroe.
Des Moines Nursery Co., Des Moines.	Hawkeye Seed Co., Des Moines.
Davenport Nursery, Nichols & Barton, Davenport.	Markett, W. A., Florist, Dubuque.
Eldon, J. R., Cut Flowers and Nursery, Sioux City.	Helne, G., Lenwood Floral Nursery, Dubuque.
	Iowa Seed & Nursery Co., Des Moines.
	Kemble Floral Co., Oskaloosa.

FLORISTS, NURSERIES AND SEEDS—CONTINUED.

Kramer & Son, Florists and Seeds and Nursery, Cedar Rapids.
 Larsen, Peter L., Nursery and Flowers, Fort Dodge.
 Leon Nursery & Seed Co., Leon.
 Michael, J. B., Seeds and Nurseries, Sioux City.
 Nashure, S. L., Feed and Nursery, Redfield.
 Mason City Greenhouses, Mason City.

Ratekin & Sons, Seeds and Nursery, Shenandoah.
 Rennison & Co., Cut Flowers and Nursery, Sioux City.
 Rush Park Seed Company, Independence.
 Shenandoah Nursery, Shenandoah.
 Sioux City Nursery & Seed Co., Sioux City.
 Sherman Nursery Co., Charles City.
 Welch, E. H., Nursery, Shenandoah.

FOUNDRIES AND MACHINE SHOPS.

American Stave Machine Co., Muscatine.
 American Iron Works, W. E. Hamilton, Mgr., Des Moines.
 Albia Foundry, Albia.
 Barry Mfg. Co., Machinery for Buttons, Muscatine.
 Bittenbender, M. H., Foundry, Knoxville.
 Boekencamp, W. M., Foundry and Machine Shop, Fort Madison.
 Belknap Bros. & Co., Machinery Mfgs., Anamosa.
 Boston Store, Dry Goods, Burlington.
 Brown Bros.' Machine Foundry, Eldora.
 Creston Machine and Repair Co., Creston.
 Clinton Separator and Engine Works, Clinton.
 Chemical Fire Engine Co. Des Moines.
 Carmody, J. C., Foundry and Machine Shops, Cedar Rapids.
 Cohen Junk Co., Burlington.
 Davenport Foundry and Machine Co., Davenport.
 Davenport Iron Works, Chris. Schelder, Mgr., Davenport.
 Des Moines Brass & Electrical Works, Des Moines.
 Des Moines Gas Engine Mfg., Des Moines.
 Des Moines Mfg. & Supply Works, Foundry and Machinery, Des Moines.
 Des Moines Gas Engines and Motor Mfg. Co., Davenport.
 De Lord Auto and Gas Engines Mfg., Fort Madison.
 Davis & Cascaden Gas Engine Co., Waterloo.
 Dubuque Machine Concern Mfg. Co., G. E. Davis, Dubuque.
 Deckert, W. D., Brass Goods Mfg. Co., Dubuque.
 Eagle Iron Foundry and Machine Works, Des Moines.
 East Davenport Machine and Foundry Co., Davenport.
 Evans, Evan E., Ice Machine Mfg. Co., Burlington.
 Flisk Bros.' Tile Laying Machine Mfg. Pella.
 Fisher Governor Mfg. Co., Marshalltown.
 Fackler & McMullin Foundry and Machine Co., Fort Dodge.
 Fort Madison Iron Works, Fort Madison.
 Gunzenhauser, J. G., Iron Foundry, Muscatine.

Globe Machine Supply Co., Boilers and Engines, Des Moines.
 Garfield Richards Co., Algona.
 Harper, C. R., Mfg. Co., Forges, etc., Marshalltown.
 Harrington, H. E., Foundry and Iron Works, Oskaloosa.
 Humeston Gas Machine Mfg. Co., Humeston.
 Hathorn, H. W., Foundry and Machine Co., Mason City.
 Head & Watom, Iron Works, Burlington.
 Hedford Bros.' Co., Foundry Machine Shops, Dubuque.
 Iowa Machinery & Supply Co., Des Moines.
 Iowa City Iron Works, Iowa City.
 Iowa Marine Engine and Launch Works, Bellevue.
 Iowa Falls Motor Co., Gas Engines, Iowa Falls.
 Iowa Iron Works, Dubuque.
 Kerr, I. A., Machine Shop, Muscatine.
 Kerrihar't & Co. Foundry and Plumbing, Red Oak.
 Keene, H. A., Mississippi Iron Works, North McGregor.
 Klaser Galvanized Iron Mfg. Co., Dubuque.
 Key City Iron Works, Dubuque.
 Lennox Machine Mfg., Marshalltown.
 Lewis & Proctor, Gas Engines and Machine Mfgs., Grinnell.
 Murray Iron Works, Burlington.
 Medder & Lundberg Machine Shop, Hawarden.
 Madsen, Lorentz & Otto, Gas Engine Mfgs., Council Bluffs.
 Montezuma Foundry & Machine Co., Montezuma.
 McElroy Iron Works, Keokuk.
 McDonald, A. Y. & Morrison Mfg. Co., Steam Heating Supplies, Dubuque.
 Moes, Wm. E., Iron Foundry, Charles City.
 Niver Iron Works, Muscatine.
 Novelty Mfg. Co., Geo. Coulson, Mgr., Sioux City.
 Nelson Foundry and Gas Engine Mfg., Harlan.
 Nelson Mfg. Co., Iowa City.
 Osage Foundry and Iron Works, Osage.
 Ottumwa Iron Works, Ottumwa.
 Ollbrech Iron and Brass Works, Cedar Falls.
 Pelton Gas Engine Co., Clinton.
 Pach, Gus, Foundry Mfg. Co., Le Mars.

FOUNDRIES AND MACHINE SHOPS—CONTINUED.

Ragatz & Schattger, Machinists, Dubuque.
 Smith, Benj., Iron Works, Shenandoah.
 Selgren & Swanson, Machine and Foundry, Sioux City.
 Stohr & Freund Gas Engine Mfg., Muscatine.
 Schultz, Herman, Foundry, Lansing.
 Sears, Geo. & Co., Punch Mfg., Clinton.
 Smith Cream Separator Mfg. Des Moines.
 Sattlee Mfg. Co., Des Moines.
 Schulte & Hinken Foundry, Fort Madison.

Skow Bros.' Foundry and Plating Mill, Newton.
 The Koch Mfg. Co., Foundry and Machine Shop, Grinnell.
 Fulloss, B., Hawkeye Foundry, Iowa City.
 Vail Gasoline and Engine Co., Marshalltown.
 Woodruff, H. C., Brass Novelty Mfg., Sioux City.
 Walther Gas Machine Mfg., Washington.
 Waterloo Gas Engine Co., Waterloo.
 Waterloo Iron Works, Waterloo.
 Yeager Bros.' Foundry, Keokuk.
 Yale Gasoline Engine Co., Cedar Falls.

FURNITURE DEALERS (WHOLESALE AND RETAIL).

Corn Palace Furniture Co., Sioux City.
 Cooper, W. H., & Son Furniture Dealer, Ottumwa.
 Chase & West, Furniture Dealers, Des Moines.
 Densel & Wilbur, Furniture Co., Marshalltown.
 Drake Furniture Co., Davenport.
 Davenport Furniture and Carpet Co., Davenport.
 Duncan Shell House Furnishing Co., Keokuk.
 Drake, Carey, Furniture Co., Keokuk.
 Davis Hall Furniture Co., Iowa Falls.
 Dubuque Altar Mfg. Co., Dubuque.
 Estherville Furniture Co., Estherville.
 Fort Madison Chair Co. Fort Madison.
 Holbrook, W. S., Furniture Co., Davenport.
 Iowa House Furnishing Co., Dubuque.
 Jones Lumberger Retail Furniture, Cedar Rapids.
 Key City Furniture Co., Dubuque.

Lindholm Furniture Co., Sioux City.
 Lindholm Albert The, Furniture, Sioux City.
 Miller, Charles A., & Sons, Furniture, Washington.
 Newton House Furnishing Co., Waterloo.
 Peavey & Nash Furniture Co., Sioux City.
 Ritchie, J. B., Furniture, Burlington.
 Robinson Furniture Co., Keosauqua.
 Randall & Son, Furniture, Mason City.
 Schneeloch, W. F., Rugs and Carpets, Burlington.
 Steiner Michael Co., Furniture, Creston.
 Sigmund & Kepfler, Carpets and Rugs, Keokuk.
 Willbur, D. C., Furniture, Marshalltown.
 Wyman Rand Carpet Co., Keokuk.
 Waterloo Mattress and Furniture Co., Waterloo.

FURNITURE MANUFACTURES.

Ackerson Ringstrom Furniture Mfg. Co., Keokuk.
 Anderson & Winter Furniture Mfg., Clinton.
 Anderson Furniture Mfg. Co., Clinton.
 Beall, A. E., Spring Bed Mfg., Clinton.
 Buell Furniture Mfg. Co., Clinton.
 Cantrill Furniture Mfg. Co., Cantrill.
 Cedar Rapids Furniture and Stair Mfg. Co., Cedar Rapids.
 Chittenden Eastman Furniture Mfg., Burlington.
 Dubuque Cabinet Makers' Association, Dubuque.
 Fisher Stevens Furniture Mfg., Charles City.
 Grinnell Furniture and Mfg. Co., Grinnell.
 Harbach, L., Furniture Mfg., Des Moines.
 Hawkeye Furniture Mfg. Co., Burlington.
 Hemingway Furniture Mfg. Co., Clinton.
 Herrick Refrigerator Co., Waterloo.
 Kelly, J. A. & Bro., Furniture Mfg., Clinton.

Knostman Peterson Furniture Mfg., Davenport.
 McCormick Mfg. Co., Settees and Swings, Des Moines.
 Metz Mfg. Co., Church Furnishings, Dubuque.
 Nopper, Wm., Furniture and Electric Power, Lansing.
 North Western Cabinet Co., Burlington.
 Parlor Furniture Mfg. Co., Cedar Rapids.
 Phillips, T. F., Church Goods, Dubuque.
 Rand & Leopold, Desk Mfgs., Burlington.
 Rowell, C. F., Furniture Mfg. Cedar Rapids.
 Schmidt & Henry Co., Furniture Mfg., Des Moines.
 Schneider, C. F., Cabinet and Furniture Mfg., Iowa City.
 Union Furniture Co., Burlington.
 Woodring Furniture Mfg. Co., Waverly.
 Wyman & Rand Co., Furniture and Draperies, Burlington.

FURNITURE, DRESSERS AND MANUFACTURES.

Cedar Rapids Robe and Fur Tannery, Cedar Rapids.	Hansen, Jens, Mfg., and Dresser, Davenport.
Richter & Sons, Furriers, Davenport.	Schultz Fur Mfg., Des Moines.

GAS, ELECTRIC LIGHT AND POWER PLANTS.

Ackley Electric Lights and Tel. Co., Ackley.	Eldora Electric Light Co., Eldora.
Electric Light and Power Co., Albia.	Estherville Electric Light and Water Works, Estherville.
Algona Water and Electric Light Co., Algona.	Excelsior Lighting Co., Marshalltown.
Ames Electric Light and Water Works, Ames.	Fairfield Gas and Electric Light Co., Fairfield.
Avoca Electric Light and Power Co., Avoca.	Forest City Electric Light and Power Co., Forest City.
Barnes Electric Light and Power Co., Maquoketa.	Fort Dodge Light and Power Co., Fort Dodge.
Bedford Electric Light Co., Bedford.	Fort Madison Electric Light and Plant Co., Fort Madison.
Bohner, L. W., Electric Light and Power Co., Malvern.	Fort Madison Gas Light Co., Fort Madison.
Boone Gas Co., Boone.	Garney & Hammond Electric Light Co., Grinnell.
Brice Gas and Electric Co., Mason City.	Gate City Gas Construction Co., Keokuk.
Britt Light and Power Co., Britt.	Glenwood Electric Power Co., Glen- wood.
Buffalo Center Electric and Heating Co., Buffalo Center.	Garner Electric Light Power and Tele. Co., Garner.
Buhwalder Bros., Electric Light and Power Co., Pella.	Grand Junction Heat Light and Power Co., Grand Junction.
Burlington Gas Light Co., Burlington.	Grundy Center Electric Light and Power Co., Grundy Center.
Capital City Gas Light Co., Des Moines.	Hamburg Electric Light and Power Co., Hamburg.
Cascade Electric Light Co., Cascade.	Hampton Electric Light and Power Co., Hampton.
Cedar Falls Light and Heat and Power Co., Cedar Falls.	Harlan Electric Light and Power Co., Harlan.
Cedar Rapids Electric Light Co., Cedar Rapids.	Hawarden Electric Light and Power Co., Hawarden.
Cedar Rapids Gas Light Co., Cedar Rapids.	Holstein Gas Light Co., (City) Hol- stein.
Charles City Electric Light and Power Co., Charles City.	Hoyer, G. C., Electric Light Plant, Nashua.
Cherokee Electric Light and Power Co., Cherokee.	Humboldt Electric Light and Power Co., Humboldt.
Citizens Electric Light and Gas Co., Centerville.	Ida Grove Electric Co., Ida Grove.
Citizens Gas and Electric Light Co., Council Bluffs.	Independence Gas and Electric Light Co., Independence.
Clinton Gas Light Co., Clinton.	Indianola Electric Light and Roller Mill, Indianola.
Colfax Electric Light and Power Co., (J. M. Stagner) Colfax.	Independence Electric Light and Pow- er Co., Independence.
Cresco Electric Light and Heating Co., Cresco.	Iowa City Gas Light Co., Iowa City.
Creston Gas and Electric Co., Creston.	Iowa City Electric Light Plant, Iowa City.
Davenport Gas and Electric Light Co., Davenport.	Iowa Light and Heat Co., Marion.
Davenport Power and Electric Light Co., Davenport.	Keokuk Gas Light and Coke Co., Keokuk.
Decorah Electric Power Co., W. H. Burdick, Mgr., Decorah.	Keota Milling Power and Electric Light Co., Keota.
Des Moines Edison Light Co., Des Moines.	Key City Gas Co., Dubuque.
Denison Electric Light and Power Co., Denison.	Kitter, F., Gas Co., Red Oak.
Dewitt Electric Light and Power Co., Dewitt.	Knoxville Electric Light Co., Knox- ville.
Dyersville Electric Light and Power Co., Dyersville.	Knight Hoyt Co., Feed Mill and Elec- tric Light Co., Fayette.
Eagle Grove Electric Co., Eagle Grove.	Lansing Electric Light Plant, Lansing.
Eldon Electric Light and Power Co., Eldon.	Lee Electric Light and Power Co., Clarinda.
Emmetsburg Electric Light and Power Co., Emmetsburg.	Le Mars Gas Light Co., Le Mars.
Enterprise Light and Power Co., Garner.	Logan Electric Light and Milling Co., Logan.
Epworth Gas Light and Heat Co., Waterloo.	Manchester Heat Light and Power Co., Manchester.

GAS, ELECTRIC LIGHT AND POWER PLANTS—CONTINUED.

Manning Electric Light and Power Co. Manning.	Osceola Electric Light Co., Osceola.
Marengo Electric Light and Power Co., Marengo.	Oskaloosa Gas Co., Oskaloosa.
Marshalltown Electric Light Co., (City) Marshalltown.	Oskaloosa Light Heat and Power Co., Oskaloosa.
Marshalltown Light and Power Co., Marshalltown.	Ottumwa Gas Light Co., Ottumwa.
Mason City Electric Co., Mason City.	Perry Electric Light and Power Co., Perry.
McGregor Electric Light and Power Co., McGregor.	Pintsch Gas Compressing Co., Council Bluffs.
Missouri Valley Electric Light Co., Missouri Valley.	Red Oak Electric Light and Gas Co., Red Oak.
Montezuma Electric Light and Power Co., Montezuma.	Sac City Electric Light Co., Sac City.
Monticello Electric Light Co., Monticello.	Sanborn Electric Light Co., Sanborn.
Mt. Pleasant Electric Light and Water Co., Mt. Pleasant.	Sigourney Electric Light and Power Co., Sigourney.
Mt. Pleasant Gas and Electric Light Co., Mt. Pleasant.	Sioux City Gas and Electric Co., Sioux City.
Mt. Vernon Electric Light and Power Co., Mt. Vernon.	Sioux Rapids Electric Light and Power Co., Sioux Rapids.
Nevada Electric Light Co., Nevada.	Spencer Electric Light and Power Co., Spencer.
New Hampton Electric Light Co., New Hampton.	State Center Electric Light and Water Co., State Center.
New Sharon Electric Light and Power Co., New Sharon.	Storm Lake Electric Light and Power Co., Storm Lake.
Northwood Electric Lighting Co., Northwood.	Swam Gas Light Mfg. Co., Waterloo.
Oelwein Electric Light Co., Oelwein.	Union Electric Light and Power Ry. Co., Dubuque.
Orange City Electric Light and Power Co., Orange City.	Waterloo Gas and Electric Co., Waterloo.
Osage Electric Light and Heating Co., Osage.	Webster City Electric Light and Water Works, Webster City.
	What Cheer Electric Light and Power Co., What Cheer.

GLOVE AND MITTEN MANUFACTURES.

Baughman, F. A., & L. H., Glove and Mitten Mfg., Washington.	Hanson Glove Mfg. Co., Boone.
Cownie, John, Glove Mfg. Co., Des Moines.	Iowa City Glove Mfg. Co., G. W. Prather, Iowa City.
European Glove Mfg Co., Mason City.	Morrison, McIntosh & Co., Glove and Mitten Mfgs., Grinnell.
Fairfield Glove and Mitten Mfg. Co., Fairfield.	Rate, E. F. & Sons, Glove Mfgs., Iowa City.
Garner & Duckworth, Glove Mfg., Boone.	Rowell, G. P., Glove Mfg., Waterloo.
	Waterloo Glove Mfg. Co., Waterloo.

GLUCOSE, SUGAR AND SORGHUM MANUFACTURES.

Bozarth, J. L., Sorghum Mfg., Cedar Falls.	Huelashore, Henry, Sorghum Mfg., Arcadia.
Ellis, Hiram, Sorghum, Mfg., Gilman.	Matthys, Frank, Sorghum Mfg., Elgin.
Glucose Sugar Refining Co., Davenport.	Morgan Bros. Sorghum Mfg., Benson.
Graham & Graham Sorghum Mfg., Wapello.	Smith Refining Co., (Sugar) Council Bluffs.
	Wapello Sorghum Mfg., Wapello.

GROCERS (WHOLESALE AND RETAIL).

Alliance Mercantile Ass'n Co-op., Cresco.	Big Four Supply Co., Cedar Rapids.
Andrews, Geo. L., Grocery Co., Marshalltown.	Breun, Charles, Retail Grocer, Sioux City.
Bicklen Winger Grocery Co., Burlington.	Buck Reiner & Co., Wholesale Grocers, Keokuk.
Black Hawk Coffee and Spice Co., Waterloo.	Burt Zaiser Co., Wholesale Grocery, Burlington.
Blaul, John & Son, Wholesale Grocery, Burlington.	Chase Bros.' Grocers, Des Moines.
Blom Collier & Co., Wholesale Grocers, Keokuk.	Dant, Fred, Co., Wholesale Grocer, Muscatine.
Biederbecke Miller Co., Wholesale Grocers, Davenport.	Farmers' Co-operative Store, Grand Junction.
	Farmers' Co-operative Society (Incorporated) Rockwell.

GROCERS (WHOLESALE AND RETAIL)—CONTINUED.

Farmers' Co-operative Store, Cooper.
Fisher, M. E., Wholesale Grocery,
Red Oak.
Fort Dodge Wholesale Grocery Co.,
Fort Dodge.
Fowler Co., Wholesale Grocers, Wat-
erloo.
Frick, P. C., & Co., Wholesale Teas
and Coffees, Cedar Rapids.
Goble, T., & Co., Wholesale Grocers,
Clinton.
Goble, J. M., Wholesale Grocery, Mus-
catine.
Graeffe, Al., Retail Grocery, Des
Moines.
Gronewig & Shoentgen, Wholesale
Grocers, Council Bluffs.
Hamill & Co., Wholesale Grocery,
Keokuk.
Hancock, John & Son, Wholesale
Grocers, Dubuque.
Havens & Brockman, Coffee Co., Dav-
enport.
Hewitt, Charles, Wholesale Grocer,
Des Moines.
Hutchinson, J. G., & Co., Wholesale
Grocers, Ottumwa.
Ihrer, Wm. & Sons, Retail Grocers,
Burlington.
Iowa Grocery Co., (Wholesale) In-
dependence.
Jewett Bros., Wholesale Grocers,
Sheldon.
Kellog, Birge, Wholesale Grocers,
Keokuk.
Korhs, Charles, Retail Grocer, Bur-
lington.
Letts, Fletcher Co., Wholesale Groc-
ers, Marshalltown.
Letts, Spencer, Smith & Co., Wholesale
Grocery, Mason City.
Marshalltown Wholesale Grocery Co.,
Marshalltown.
McFadden Coffee and Spice Co., Du-
buque.
McQuaid Grocery Co., Retail, Des
Moines.
McQuiston, W. L., & Co., Retail
Grocers, Oskaloosa.
Melhop, John, Son & Co., Wholesale
Groceries, Dubuque.
Merrill, W. & Co., Wholesale Grocers,
Ottumwa.
Minburn Co-operative Association,
Minburn.

Mull, C. L. & Son, Wholesale Grocery,
Muscatine.
Naylor, Thomas, Retail Grocer, Des
Moines.
Northern Iowa Grocery Co., Esther-
ville.
Northwestern Baking Powder Mfg.
Co., Sioux City.
Perry, Geo. C., Wholesale Grocers,
Dubuque.
Prouty, C. C., Wholesale Grocers, Des
Moines.
Reimers, J. M. & Co., Groceries,
Keokuk.
Riggo, T. R., Wholesale Groceries,
Centerville.
Rudolph Retail Grocery, Cedar Rapids.
Schrader Kline Wholesale Groceries,
Dubuque.
Shenkberg Wholesale Grocers and
Candy Mfgs., Sioux City.
Smith & Burdeck, Grocers, Davenport.
Smith, Lichty & Hillman, Wholesale
Grocery, Waterloo.
Spencer, H. L., Wholesale Grocers,
Oskaloosa.
Spencer Letts Coffee Co., Marshall-
town.
Stewart Bros., Wholesale Grocers,
Council Bluffs.
Tackaberry, Wm. & Co., Wholesale
Grocers and Candy Mfgs., Sioux
City.
Tollerton & Stetson Co., Wholesale
Grocers and Candy Mfgs., Sioux
City.
Tone Bros., Coffee and Spice Mfgs.,
Des Moines.
Toussaint & Tuxler Co., Grocers, Du-
buque.
Van Patton & Marks, Grocers and
Coffee Roasters, Davenport.
Warfield, Pratt Howell Co., Wholesale
Groceries, Cedar Rapids.
Warfield, Pratt, Howell Co., Whole-
sale Groceries, Des Moines.
Warfield, Pratt, Howell Co., Whole-
sale Grocers, Sioux City.
Washburn Halligan Coffee Co., Dav-
enport.
Whitter Bros., Wholesale Groceries,
Cedar Rapids.
Wiley, W. B., Grocery, Davenport.

HARDWARE SPECIALTIES MANUFACTURES.

Adams Co., Hardware and Specialties,
Dubuque.
American Lubricator Co., Des Moines.
Automatic Electric and Machine Co.,
Slot Machines, Dubuque.
Baker, F. E., Foundry and Hardware
Specialties, Oskaloosa.
Bunn, Benjm., Lime Mfg., Charles
City.
Brighton, S. J., Mfg. Co., Fairfield.
Brudes, Leo, Swedish Sleigh Bell
Mfg., Burlington.
Carroll Muzzle Mfg. Co., Carroll.
Casebeers, Gunstock Mfg. Co., Cedar
Rapids.
Clinton Novelty Works, Clinton.
Closz & Howard, Sleigh Mfg., Webster
City.
Coshocton Novelty Mfg. Co., (Adv.
Signs) Council Bluffs.

Creston Novelty Mfg. Co., Creston.
D. A. D. Latch Mfg. Co., Manchester.
Darby, J. A., Incandescent Light
Mfgs., Council Bluffs.
Decker Mfg. Co., Hardware Special-
ties, Keokuk.
De La Hunt Flush Tank Mfg. Co.,
Cedar Rapids.
Dodd & Struthers, X-Ray Machine and
Lightning Rod Manfgs., Des
Moines.
Dubuque Stamping and Enameline
Works, Dubuque.
Garton Daniels Electrical Supplies,
Keokuk.
Hawthorn Novelty Co., Iowa City.
Higginson Mfg. Co., Marshalltown.
Iowa Grinder and Steamer Co., Wat-
erloo.
Iowa Specialty Mfg. Co., Ottumwa.

HARDWARE SPECIALTIES MANUFACTURES—CONTINUED.

Johnson & Sharp Hardware Novelty Mfgs., Ottumwa.	Northwestern Novelty Works, Cherokee.
King Mfg. Co., Weather Strips, Newton.	Orcutt, W. W. Co., Hardware and Specialty Mfg., Sioux City.
Langworthy & Merrill Novelties, Dubuque.	Purinton Steam Feed Cooker Mfg., Des Moines.
Lathrop Novelty Mfg. Co., Council Bluffs.	Ritter & O'Leary, Mfg., Newton.
Logan Mfg. Co., Ottumwa.	Specialty Mfg. Co., Gasoline Lamps, Council Bluffs.
Marshalltown Trowel Mfg. Co., Marshalltown.	United States Steel Lock Mfg. Co., Clinton.
Miles, Judson E., Novelty Works, Newton.	Walker Novelty Mfg. Co., Hardware Specialties, Council Bluffs.
Multa Novelty Co., Burlington.	Westphall Conchar & Co., Hardware Mfgs., Dubuque.

HARDWARE (WHOLESALE AND RETAIL).

Abbott & Son, Hardware, Marshalltown.	Knapp Spencer Co., Wholesale Hardware, Sioux City.
Altrogg, H. J., Hardware, Waterloo.	Lamp, Peter Iron Co., Wholesale, Davenport.
Armstrong, C. E. & Co., Hardware and Plumbing, Clinton.	Larson, Thomas, Hardware, Eldora.
Atlantic Lightning Rod Mfg. Co., Atlantic.	Lowell, T. J., Retail Hardware, Cedar Rapids.
Baker Hardware Co., Sioux City.	Miles Hardware Co., Mason City.
Baldwin Bros.' Wholesale Hardware, Clinton.	Mulligan & Miller Hardware and Implement Dealer, Eagle Grove.
Beach & Weld Hardware, Sioux City.	Nancolls, Chas., Hardware, Estherville.
Bolton, L. E., Hardware, Des Moines.	O'Dea Hardware Co., Des Moines.
Brown, Hurley Hardware Co., Des Moines.	Petersen & Shoening Co., Hardware, Council Bluffs.
Cole & Cole Hardware, Council Bluffs.	Prussia Hardware Co., Fort Dodge.
Crary Bros.' Hardware and Machinery, Boone.	Rascher & Schrickner Hardware Co., Davenport.
Crooks, H. W., Hardware, Ionia.	Rea Co., Hardware and Implements, Corydon.
Cutler Hardware Co., Waterloo.	Reynolds, R. H., & Sons, Hardware Mfg., Elliott.
Drake Hardware Co., Burlington.	Schmidt, C. F., Wholesale Hardware, Burlington.
Empke Shugart Hardware Co., Council Bluffs.	Scott, J. M. & Co., Hardware and Implements, Burlington.
Estherville Hardware and Implement Co., Estherville.	Seither & Cherry Co., Hardware, Keokuk.
Faeth, E. O., Iron Co., Des Moines.	Sieg Iron Co., Wholesale, Davenport.
Gillette Hardware Co., Sioux City.	Sickles, Preston & Nutting Hardware, Davenport.
Hanson, Louis & Son, Hardware, Davenport.	The Charles E. Faeth Co., Wholesale Hardware, Sioux City.
Harper & McIntire Co., Wholesale and Retail Hardware, Ottumwa.	The Robt. Donahue Iron and Hardware Co., Burlington.
Haw & Simons Hardware Co., Ottumwa.	Treadway & Sons, Hardware, Dubuque.
Huber & Kalbach Hardware Co., Oskaloosa.	Webber & Co., Hardware and Iron Keokuk.
Kant & Kritchbaum, Hardware, Burlington.	
Kingsbury, J. B. & Co., Hardware and Plumbing, Osage.	

HARNESS AND SADDLERY MANUFACTURES.

Bardes Sadderly Mfg. Co., Sioux City.	Fleming Mfg. Co., Harness, Clinton.
Bonecamp & Son Horse Collar Mfg., Keokuk.	Gabrielson, Abden, Harness Mfg., Boone.
Boyt, Walter, Saddlery Mfg., Des Moines.	Goeppenger, L. H., Harness Mfg., Boone.
Clinton Saddlery Mfg. Co., Clinton.	Granger, N. B., Harness Mfg., Maquoketa.
Des Moines Saddlery, Mfg., Des Moines.	Hausknecht, Amandus, Harness Mfg., Burlington.
Dubuque Harness and Saddlery Mfg. Co., Dubuque.	Harley, John, Harness Mfg., Des Moines.
Dubuque Rubber and Belting Mfg. Co., Dubuque.	Hess, Jacob, Harness Mfg., Muscatine.
Fachman, W. J., Harness, Mfg., Sioux City.	Hoffman, Paul, Horse Collar Mfg., Dubuque.
Fitch Bros.' Hardware and Harness Mfg., Fonda.	Hull L. L., Harness Manfg., Oskaloosa.

HARNESS AND SADDLERY MANUFACTURES—CONTINUED.

Iowa Saddlery Co., Waterloo.	Petto-Steffen Saddlery and Harness Mfgs., Davenport.
McConnell, S. R. & I. C., Harness and Saddles Mfgs., Burlington.	Schmidt, Fred, Horse Collar Mfg., Davenport.
Kinney, Charles E., Harness Maker, Des Moines.	Schott, J. L., Wholesale Leather and Saddlery, Burlington.
Meyer Bros.' Saddlery Mfg., Sioux City.	Sears Frizzell Co., Saddlery Mfgs., Davenport.
Newton Harness Mfg., Co., Newton.	Sturges Bros., Harness Mfgs., Sioux City.
O'Harrow, Len., Saddlery Mfg., and Shoe Dealer, Sioux City.	Vinton Harness Mfg., Vinton.
Oskaloosa Saddlery Mfg. Co., Oskaloosa.	Waterloo Saddlery Co., Waterloo.
Ostrand Saddlery Co., Muscatine.	Wahl, T. A. & Sons, Harness Mfgs., Seymour.
Palmer, W. W., Harness Mfg., Hamburg.	Wapello Harness Mfg., Wapello.
Peerless Harness and Saddlery Mfg., Winterset.	

HEATERS AND FURNACE MANUFACTURES.

American Stove and Range Co. Mfg., Keokuk.	McCarroll Stove Mfgs. and Repairers, Ottumwa.
Brown, J., Steam Heating Appliances Mfg., Newton.	Pioneer Stove Foundry, Leeds, Sioux City.
Economy Furnace Co., Cedar Rapids.	Polk, J. S., Heating Co., Des Moines.
Frank Bros.' Stove Foundry, Davenport.	Sewell, W. A., Hot Water Furnace Mfg., Clinton.
Green, S. & Sons, Furnace Mfgs., Des Moines.	Smith, Milton Perry, Furnace Foundry and Mfg. Co., Sioux City.
Hawkeye Furnace Mfg., Sam McGraham, Mgr., Davenport.	Webster City Hot Water Heating Co., Webster City.
Ideal Heater Mfg. Co., Oskaloosa.	Webster City Steel Radiator Co., Webster City.
Keith Furnace Mfg. Co., Des Moines.	

HIDES, TALLOW AND WOOL DEALERS.

Balles & Rodgers, Hides and Tallows, Sioux City.	The Robe Tanning and Hide Co., Sioux City.
Edes Robe Tanning Co., Dubuque.	Willard H. & Son, Hides, Furs, etc., Marshalltown.
Strange Bros. Hides and Tallow Co., Sioux City.	Wolf & Co., Hides and Pelts, Cedar Rapids.

INCUBATOR MANUFACTURES.

Des Moines Incubator Mfg. Co., Des Moines.	Iowa Incubator Mfg. Co., Des Moines.
Hawkeye Incubator Co., Newton.	Klondike Incubator Mfg. Co., Des Moines.

JEWELRY MANUFACTURES.

Ayers, J. & Sons, Jeweler and Musical Instruments, Keokuk.	Equitable Jewelry Mfg. Co., Iowa City.
Beck, W. H., Jeweler and Mfr., Sioux City.	Hattenbach & Magee, Jewelers, Sioux City.

KNITTING AND HOSIERY MANUFACTURES.

Euke, Gustav, Knitting Works, Clinton.	Iowa Hosiery Knitting Co., Des Moines.
Des Moines Hosiery Mills, Des Moines.	Pioneer Knitting Works, Iowa City.

LAUNDRIES.

Algona Steam Laundry, Algona.	Anthes Steam Laundry, Fort Madison.
Allston & Deball Laundry, Fairfield.	Baker, W. A., Steam Laundry, Grinnell.
American Laundry, Des Moines.	

LAUNDRIES—CONTINUED.

Bascomb & Zook Laundry, Rock Rapids.
 Baxter & Glassen, Laundry, Dubuque.
 Beaumont Laundry Co., Webster City.
 Bedford Laundry Co., Bedford.
 Bernards' Model Laundry, Muscatine.
 Black, M. S., Steam Laundry, Creston.
 Buck's Laundry, Davenport.
 Buck's Steam Laundry, Davenport.
 Burchard, Mrs., Laundry, Charles City.
 Capital City Laundry, Des Moines.
 Cascade Steam Laundry, Cedar Rapids.
 Centerville Steam Laundry, Centerville.
 Champaign & Son Laundry, Des Moines.
 Childs, Burman F., Laundry, Mt. Pleasant.
 City Steam Laundry, Des Moines.
 City Steam Laundry, S. W. Upton, Dubuque.
 Clines Steam Laundry, Shenandoah.
 C. O. D. Laundry, C. Crum, Mgr., Davenport.
 C. O. D. Laundry, Dubuque.
 C. O. D. Steam Laundry, Iowa City.
 Cook Bros.' The Peoples, Davenport.
 Colfax Steam Laundry, Colfax.
 Corning Steam Laundry, Corning.
 Cresco Steam Laundry, Cresco.
 Crystal Hand Laundry, Dubuque.
 Dubois Steam Laundry, Clarion.
 Doyle & Garvey Steam Laundry, Perry.
 Des Moines Laundry, J. H. Toulissant, Mgr., Des Moines.
 Dubuque Laundry Co., Dubuque.
 Eagle Grove Steam Laundry, Eagle Grove.
 Eagle Laundry Co., Council Bluffs.
 Eddy & Howe Laundry, Washington.
 Erwin, Joseph, Laundry, New Process, Cedar Rapids.
 Evans' Laundry Co., Council Bluffs.
 Excelsior Steam Laundry, Clinton.
 Excelsior Steam Laundry, J. L. Schott, Fort Madison.
 Ferris Bros.' Laundry, Dubuque.
 Fink, Mrs. Belle, Laundry, Davenport.
 Flinton, W. W., Laundry, Cherokee.
 Flitton Steam Laundry, Marshalltown.
 Fort Dodge Steam Laundry, Fort Dodge.
 Fraser, J. R., Laundry, Sioux City.
 Gate City Steam Laundry, Keokuk.
 Gordon & Shea Laundry, Ottumwa.
 Green & Dunlap's Laundry, Clarinda.
 Hamilton Laundry Co., Sioux City.
 Hawkeye Laundry, Boone.
 Hawkeye Laundry, Burlington.
 Hill & Son Laundry, Iowa Falls.
 Huff & Kennedy Laundry, Newton.
 Hulise & McDonald, Laundry, Vinton.
 Humboldt Steam Laundry, Humboldt.
 Ida Grove Steam Laundry, Ida Grove.
 Ideal Steam Laundry, Mason City.
 Iowa Laundry, Des Moines.
 Iowa Steam Laundry, Ottumwa.
 I. X. L. Laundry, Des Moines.
 Johnson, W. E., Laundry, Keokuk.
 Johnson Steam Laundry, Spencer.
 Kurtz, D. A., Steam Laundry, Cedar Rapids.
 Lackey & Morean Laundry, Charles City.
 Larson, Hans, Laundry, Missouri Valley.
 Laurel Laundry, Sioux City.
 Laurie, A. M., Laundry, Hamburg.
 Manchester Steam Laundry, Manchester.
 Mason City Steam Laundry, Mason City.
 Mayer, W. E., Steam Laundry, Sheldon.
 McGregor Steam Laundry, McGregor.
 Meeker Empire Laundry, Marshalltown.
 Miller Bros.' Laundry, Clinton.
 Montezuma Steam Laundry, Montezuma.
 Munger's Laundry, Des Moines.
 New England Steam Laundry, Sioux City.
 New Method Laundry, Davenport.
 Newmires Laundry, Sioux City.
 New Process Steam Laundry, Carroll.
 New Process Laundry, Muscatine.
 New Sharon Steam Laundry, New Sharon.
 Nevada Steam Laundry, Nevada.
 Northwestern Laundry, Des Moines.
 Onstoll & Dyser Laundry, Mechanicsville.
 Oskaloosa Steam Laundry, Oskaloosa.
 Peoples' Steam Laundry, Des Moines.
 Peoples' Steam Laundry, Iowa City.
 Pierpont Laundry, Clinton.
 Peerless Steam Laundry, Clinton.
 Perry Lily White Laundry, Perry.
 Pettitt Box Mfg., and Laundry, Burlington.
 Pully & Phippen Laundry, Red Oak.
 Queen City Laundry, Mason City.
 Regal Steam Laundry, Centerville.
 Seymour White Laundry, Sioux City.
 Sherl & Scott Steam Laundry, Harlan.
 Sherman, F. M., Laundry, Fort Dodge.
 Sickless Laundry Co., Burlington.
 Spencer & Wasmer Co., Laundry, Sioux City.
 Spensley Bros.' Laundry, Oelwein.
 Standard Laundry, Des Moines.
 The Electric Laundry, Muscatine.
 Tilden Laundry, Des Moines.
 Twin City Laundry, Tama.
 Villisca Steam Laundry, Villisca.
 Waterloo Steam Laundry, Waterloo.
 Wallace & Hart, Bluff City Laundry, Council Bluffs.
 Werling, C. H., Laundry, Estherville.
 Zook Bros.' Laundry, Atlantic.

LIME MANUFACTURES.

Alden Lime Co., Clinton.
 August, Frank, Lime Mfgs., Vinton.
 Eagle Point Lime Works, Dubuque.
 Key City Lime Works, Dubuque.
 Hurst, A. & C., Lime Mfg., Hurstville.

Hyler, C. G., Lime Mfg., Bellevue.
 Joiner & Gold, Lime Mfg., Maquoketa.
 Stewart, L. B., Lime Mfg., Monmouth.
 Sugar Creek Lime Co., Wilton Junction.

LINSEED OIL.

American Linseed Oil Co., Cedar Rapids.

American Linseed Oil Co., Des Moines.
The American Linseed Oil Co., Sioux City.

LITHOGRAPHERS.

Iowa Lithographing Co., Des Moines. | Tri-City Lithographing Co. Davenport.

LIVERY, EXPRESS, TRANSFER AND STORAGE COMPANIES.

Adams Express Co., J. H. Swift, Sup't, Chicago.
American Express Co., J. D. Garner, Sup't., Chicago.
Adams Express Co., Des Moines.
Bryne Bros.' Transfer Co., Dubuque.
Bolton Transfer Co., Des Moines.
Blue Line Transfer Co., Des Moines.
Criswell Transfer and Livery, Ottumwa.
Crips, W. S., & Bro., Livery and Transfer, Ottumwa.
Council Bluffs Transfer Co., Council Bluffs.
Cedar Rapids Transfer Co., Cedar Rapids.
Cedar Falls Transfer Co., Cedar Falls.
Champlain Bros.' Livery, Clinton.
Dagget, E., & Sons, Livery, Ottumwa.
Davenport, W. C., Co., Livery and Transfer, Sioux City.
Des Moines Transfer Co., Des Moines.
Dolph & Wyrick, Transfer Line, Maquoketa.
Hawkeye Transfer Co., Des Moines.
Hogan & Dehon Transfer, Eldora.
Iowa Transfer Co., Des Moines.
Jennings Livery Co., Emmetsburg.
Jaeger, Henry, Livery and Transfer, Davenport.
Leem, E. D., Ice and Livery, Northwood.
Lewis Bros.' Thresher and Transfer Co., Oskaloosa.
Marshalltown Transfer and Storage Co., Marshalltown.

McHose Bros.' Livery and Transfer, Marshalltown.
McComb Bros.' Livery and Transfer Co., Marshalltown.
Merchants Transfer Co., Des Moines.
Mason City Transfer Co., Mason City.
McElrath Teaming and Transfer, Dubuque.
Oskaloosa Livery and Transfer Co., Oskaloosa.
Pacific Express Co., Des Moines.
Patrick, J. W., Livery and Undertaker, Des Moines.
Red Line Transfer Co., Des Moines.
Sioux City Bus and Transfer Co., Sioux City.
Sioux City Warehouse Co., Sioux City.
Schricks Transfer and Express Co., Davenport.
Sinton, Wm., Gen. Transfer, Keokuk.
The Martin Strelan Freight Transfer, Dubuque.
Union Transfer Co., Council Bluffs.
United States Express Co., W. Quick, Sup't., Des Moines.
Unterkercher, F. L. & G. F., Livery and Undertakers, Burlington.
White's Transfer Line, Marshalltown.
Western Transfer Co., 311 Pearl St., Sioux City.
Wells, Fargo Express Co., Des Moines.
White Line Transfer and Livery Co., Fort Dodge.
White Line Transfer Co., Des Moines.
Wadleigh, E. A., Storage, Clinton.

LUMBER, PLANING AND SAW MILLS.

Anthes Lumber Co., Knoxville.
Algona Hardwood Lumber Co., Algona.
Atlee, S. S., & J. C. Lumber Mfg., Fort Madison.
Allison & Son, Planing Mill, Eldora.
Bartlett, J. W., Planing Mill, Creston.
Bowman, S. H., Lumber Co., Mapleton.
Burgess & Sons, Lumber, Cresco.
Bowman Kranz Lumber Co., Holstein.
Bailow, W. B. Lumber Co., Fort Madison.
Blackhawk Lumber Co., Waterloo.
Bruce, A. J., Planing Mill, Manchester.
Burlington Lumber Co., Burlington.
Chrisman, L. P. & Co., Planing Mill, Ottumwa.
Cable Lumber Co., Davenport.
Centerville Lumber Co., Centerville.
Cedar Falls Lumber Co., Cedar Falls.
City Industrial Works, Planing Mill, Baxter.
Cedar Falls Planing Mill and Novelty Works, Cedar Falls.

Chicago Lumber Co., Des Moines.
Dixon, W. J., Lumber Co., Sac City.
Duckworth, W. A. & Son, Hardwood Lumber Co., Keosauqua.
Dixon Lumber Co., Sac City.
Dobbingier Bros.' Lumber, McGregor.
Duel Bachman Lumber Co., Des Moines.
Dewell Bachman Lumber Co., Madrid.
Derby, Ed., Planing Mill Co., Burlington.
Ewing & Jewett Lumber Co., Des Moines.
Elstrom, Peter, Planing Mill, Madrid.
Eberhardt & Beerman Harwood Lumber, Guttenberg.
Fullerton Lumber Co., Sioux City.
Fort Dodge Lumber Co., Fort Dodge.
Fish & Levi Planing Mill, Decorah.
Farmers' Lumber Co., Battle Creek.
Fletcher, H. W., Saw Mill, Ottumwa.
Fay Bros. & Co., Lumber, Wholesale, Cedar Rapids.
Fullerton Lumber Co., Cedar Rapids.

LUMBER, PLANING AND SAW MILLS—CONTINUED.

Fairfield Lumber Co., Fairfield.
 Finland & Holbrook Lumber, Onawa.
 Fillson & Leefer Planing Mill, Tipton.
 Green Bay Lumber Co., Mapleton.
 Graham, Orsen W., Planing Mill, Council Bluffs.
 Green Bay Lumber Co., Ida Grove.
 Green Bay Lumber Co., Des Moines.
 Gilcrest, J. K. & W. H., Planing Mill, Des Moines.
 Garmo & Co., Planing Mill, Keokuk.
 Heecker, H. F., Mgr., Irwin Lumber Co., Marshalltown.
 Holt, Peter A., Planing Mills, Lake Mills.
 Holder, Teeter Lumber and Grain, Cantril.
 Holstein Lumber Co., Holstein.
 Hall & McDonald Co., Lumber, Iowa Falls.
 Hawkeye Lumber Co., Cedar Rapids.
 Harris & Cole Bros., Planing Mill and Pumps, Cedar Falls.
 Hartley Lumber Co., Hartley.
 Hollister Lumber Co., Manchester.
 Hagge Metz Planing Mill, Dubuque.
 Hedge, Gilbert & Co., Lumber Burlington.
 Independent Lumber Co., Dayton.
 Ingwersen & Borbeck Co., Lumber Mfg., Clinton.
 Iowa City Lumber Co., Iowa City.
 Iowa Lumber Co., Iowa Falls.
 Joyce, W. T., Lumber Mfg., Clinton.
 Krentzer & Wassem, Planing Mill, Marshalltown.
 Kennedy, J. M., Planing Mill, Knoxville.
 Knapp Stout Co., Lumber Mfg., Dubuque.
 Lake Mills Lumber Co., Lake Mills.
 Lindsay & Phelps Co., Lumber, Davenport.
 Longshore, G. L., Lumber Co., Des Moines.
 Leehue, Thomas, Saw Mill, McGregor.
 Musser Lumber Co., Muscatine.
 Muscatine Lumber and Box Co., Muscatine.
 Moore, A., Retail Lumber Yard, Marshalltown.
 Moss & King Saw Mill and Ties, Sterling.
 Miller, Christian, Saw Mill, Milton.
 McCoy, H. M., Planing Mill, Ottumwa.
 Major Crull Lumber Co., Davenport.
 Miller, Chris & Sons Lumber Co., Davenport.
 Mason City Wholesale Lumber Co., Mason City.
 Monroe, Geo., Lumber Co., Anamosa.
 Mutual Lumber Co., Rockwell City.

Musser, Wm., Wholesale Lumber, Iowa City.
 Menser, Otto & Co., Lumber, Wholesale and Retail, Dubuque.
 Merritt & Son, Planing Mill, Dunlap.
 Northern Lumber Co., Forest City.
 North Iowa Lumber Co., Algona.
 Nye & Schnelder Co., Lumber and Grain, Mason City.
 Peterson & Bell Co., Box Mfg. Clinton.
 Peterman & Voss, Planing Mill, Exira.
 Porter, C. M., Lumber Co., Oskaloosa.
 Queal, J. H., Lumber Co., Des Moines.
 Rand Lumber Co., Burlington.
 Rodgers & Co., Planing Mill, Dunlap.
 Rowe, J. D. & Son, Planing Mill, Marion.
 Reddow, J. R. & Son, Hardwood Lumber, Updegraff.
 R. Newton, Planing Mill, Missouri Valley.
 Rampf & Fadden Lumber Co., Dubuque.
 Root, Wilcox & Co., Lumber and Implements, Estherville.
 Sibley Mfg. Co., Planing Mill, Sibley.
 Spaulding, James D., Lumber Co., Sioux City.
 Seiffert, H. O., Lumber Co., Davenport.
 Stewart, D. J., Lumber and Grain, Charlton.
 Sumner Planing Mill, Sumner.
 Spence, Andrew J., Saw Mill, Madrid.
 South Muscatine Lumber Co., Muscatine.
 Standard Lumber Co., Dubuque.
 The J. H. Queal Lumber Co., Sioux City.
 Tabor Lumber Co., Keokuk.
 Townsend & Merrill Lumber Co., Cedar Falls.
 Timeon, C., Planing Mill, Perry.
 Valley Lumber Co., What Cheer.
 Wilbur & Wilbur Lumber Co., Decorah.
 Weyerhaeuser and Denkmann Lumber Co., Davenport.
 Wind, P. H., Planing Mill and Wood Work, Council Bluffs.
 Wheelock, H. D., Planing Mill and Lumber, Grinnell.
 Ward, B. W. and L. C., Planing Mill, New London.
 Williams & Hunting Co., Planing Mill, Cedar Rapids.
 West Side Lumber Co., Independence.
 Wackerbath & Blaumer Lumber Co., Independence.
 Zimmerman & Ives, Saw Mill, Guttenberg.

MARBLE, GRANITE AND METAL MONUMENTS.

Anamosa Marble and Granite Co., Anamosa.
 Big Four Marble Works, Sheldon.
 Cameron, McManus, Joyce & Co., Keokuk.
 Creston Marble Works, J. C. Sullivan, Creston.
 Des Moines Marble and Mantle Co., Monuments, Des Moines.
 Dubuque Monument Co., Dubuque.
 Eastern Granite Co., Cedar Rapids.
 Goddens & Ballard, Marble and Granite, Emmetsburg.

Gould Granite Co., Cedar Rapids.
 Hoffman, Edgar, Parlor City Marble and Granite Works, Cedar Rapids.
 Leyda & Co., Marble Works, Burlington.
 Linz, Frank, Marble Works, Dubuque.
 Musmanger, D. & Sons, Marble Monuments, Washington.
 Rappallee, D. W., Marble Monuments, Sioux City.
 Rowatt, John, Cut Stone Monuments, Des Moines.

MARBLE, GRANITE AND METAL MONUMENTS CONTINUED.

Schrader, J. H. Marble Works, Carroll.
 Schricker, Rodley & Co., Marble Monuments, Davenport.
 Western Granite Co., 415 West Second

St., Des Moines.
 Western Granite and Marble Co., Des Moines.
 Western White Bronze Co., Des Moines.

MATTRESS MANUFACTURERS AND UPHOLSTERERS.

Burlington Upholstering Mfg. Co., Burlington.
 Copper, C. F., Mattress and Furniture Mfg., Sioux City.
 Dubuque Mattress Mfg. Co., Dubuque.
 Cromer, M. & Co., Mattress Mfg., Davenport.
 Fort Dodge Mattress Mfg. Co., Fort Dodge.
 Ihde Bros., Upholsterers, Dubuque.

Mason City Mattress Mfg. Co., Mason City.
 Millholen, Bert B., Mattress Mfg., Cedar Rapids.
 Mummert, M. E., Upholsterer, Sioux City.
 Rhodda, J. F., Mattress Mfg., Sioux City.
 Union Mattress Mfg. Co., C. Friedman, Mgr., Sioux City.

MEAT PACKERS—PORK, BEEF AND WHOLESALE MEATS.

Agar Packing Co., Pork and Beef, Des Moines.
 Armour Packing Co., Wholesale Meats, Davenport.
 Armour & Co., Pork and Beef Packers, Sioux City.
 Boeck, Geo., Beef and Pork Packing Co., Burlington.
 Britton & Co., Pork Packers, Marshalltown.
 Bump, T. B., Meats and Stock Commission, Grinnell.
 Cudahy Packing Co., Cedar Rapids.
 Decker, J. E. & Son, Packers, Mason City.
 Dubuque Packing Co., J. Beach, Dubuque.
 Iowa Packing and Provision Co., Clinton.
 Iowa City Pork Packing Co., Iowa City.
 Hammond Packing Co., Wholesale Meats, Dubuque.

Kilhrs, Henry, Pork Packer and Wholesale Meats, Davenport.
 Morrell, John, Co., Limited, Pork and Beef Packers, Ottumwa.
 Rath, G. P., Pork Packers, Dubuque.
 Rath Pork Packing Co., Waterloo.
 Ryan Packing Co., Dubuque.
 Hammond Packing Co., Wholesale Meats, Dubuque.
 T. M. Sinclair Co., Pork Packers, Cedar Rapids.
 Sterling Pork Packing Co., Sioux City.
 John H. Stroble, Pork Packers, Dubuque.
 Swift & Co., Wholesale Meats, Davenport.
 Swift & Co., Meat Packers, Ottumwa.
 The Cudahy Packing Co., Pork and Beef, Sioux City.
 Tri-City Packing and Provision Co., Davenport.
 Wymer & Wymer, Sausage Mfrs., Dubuque.

MEDICINE MANUFACTURERS AND CHEMICAL PRODUCTS.

Beck Chemical Mfg. Co., M. Griswold, Ottumwa.
 Baker, S. F. & Co., Medicine Mfrs., Keokuk.
 F. M. Bacon, Medicine Mfg., Manchester.
 Chamberlain Medicine Mfg., Des Moines.
 Draper & Smith, Medicine Mfrs., Albia.
 Ellis, Dr. F. & Son, Medicine Mfrs., Centerville.
 Florence Medicine Co., Red Oak.
 Hercules Mfg. Co., Medicine, Centerville.
 Gladstone Medicine Mfg. Co., Hawarden.
 Iowa City Domestic Med. Co., Iowa City.
 Iowa Medicine Mfg., Keokuk.

Lichty, Norman, Patent Medicine Mfg., Des Moines.
 L. E. R. Remedy Medicine Mfg., Rock Rapids.
 Miller, A. F., Chemical Works, Burlington.
 Mack Bros. & Co., Medicine Mfrs., Spencer.
 Myers Chemical Co., Leon.
 National Drug Co., Medicine Mfrs., New Hampton.
 Pritchard Remedy Co., Cherokee.
 Schaefer, G. H., Mfg. Chemist, Fort Madison.
 Severs, W. F., Mfg. Chemist, Cedar Rapids.
 Star Medicine Mfg. Co., Charles City.
 20th Century Medicine Co., Sheldon.
 Waterbury Chemical Co., Drug Mfg., Des Moines.

MERCHANT TAILORS.

Biffer Bros., Merchant Tailors, Dubuque.
 Cash, F. J., Merchant Tailor, Webster City.
 Drummond & Campbell, Merchant Tailors, Davenport.
 Dean, H. W., Merchant Tailor, Dubuque.

Elliott & Gormey, Merchant Tailors, Eagle Grove.
 Elsfieldt Clothing Co., Merchant Tailors, Burlington.
 Froesse, John C., Merchant Tailor, Davenport.

MERCHANT TAILORS.

Greiger, John J., Merchant Tailor, Clinton.
 Glasgow Woolen Mill Co., Tailors, Des Moines.
 Haire Cole & Co., Clothiers and Merchant Tailors, Fort Dodge.
 Harris & Cuddy, Merchant Tailor, Fairfield.
 Hammon J., Merchant Tailor, Fairfield.
 Kreim, H. L., Merchant Tailor, Cedar Falls.
 Kobat, E., Merchant Tailor, Dubuque.
 Lindblom & Westling, Merchant Tailors, Davenport.
 Lumsden, M. P., Tailor and Steam Dye Works, Iowa City.
 Lowitz, S. S., Merchant Tailor, Keokuk.
 Marshalltown Tailoring Co., Marshalltown.
 Miller Merchant Tailoring Co., Cedar Rapids.
 Nichol The Tailor, Des Moines.
 Nelson, John T. & Son, Merchant Tailor, Boone.

Oliver, Jon F., Merchant Tailor, Council Bluffs.
 Rieck, A., Merchant Tailor, Davenport.
 Schake, Wm., Merchant Tailor, Davenport.
 Stenke, T. D., Clothing and Merchant Tailor, Atlantic.
 Strause Bros. Merchant Tailors, Burlington.
 Salter & Lofquist, Merchant Tailor, Burlington.
 Siegelbaum, A., Merchant Tailor, Davenport.
 Severson & Anderson, Merchant Tailors, Ottumwa.
 Salter & Lofquist, Merchant Tailors, Burlington.
 Strause Bros. Merchant Tailor, Burlington.
 Thompson, C., Merchant Tailor, Cedar Falls.
 Wienecke, W. F., Merchant Tailor, Burlington.

MILLING, FLOUR AND GRAIN.

Alton Milling Co., Alton.
 Akron Milling Co., Akron.
 Adel Milling and Feed Co., Adel.
 A. T. Davis, Milling Co., Madrid.
 Alton Milling Co., Cedar Rapids.
 Algona Milling and Grain Co., Algona.
 Bedford Grain Elevator, Bedford.
 Bunker, Theodore, Gold Roller Mills, Red Oak.
 Buffalo Center Flour and Electric Power Co., Buffalo Center.
 Bosch Ryan Grain Co., Davenport.
 Baumer Roller Mill, Maquoketa.
 Buffalo Roller Mills, Anamosa.
 Baumhover, Henry, Roller Mill, Carroll.
 Big Four Flour Mills, Sheldon.
 Burlington & Mississippi Elevator Co., Burlington.
 Britt Flour Mill, Britt.
 Baird Grist Mill, Baird.
 Beed, W. J., Milling, Hampton.
 Clarinda Elevator, Clarinda.
 Crystal Mill and Grain Co., Council Bluffs.
 Centennial Milling Co., Avoca and Council Bluffs.
 Creston Milling Co., Creston.
 Capital Mill Co., Sioux City.
 Conley, J. B., Flour Mill and Electric Power Co., Lake Mills.
 City Roller Mills, Council Bluffs.
 Cherokee Roller Mill Co., Cherokee.
 Clinton Milling Co., Clinton.
 Campbell, J. A., & Son, Flour Mill and Elevator, Atlantic.
 Cedar Falls Milling Co., Cedar Falls.
 Cresco Roller Mills, Cresco.
 Capital City Roller Mills, Des Moines.
 Counselman, Charles & Co., Grain, Des Moines.
 Cooper, W. S., Flour Mill, Cedar Rapids.
 Chariton Milling Co., Chariton.
 Charter Oak Milling Co., Charter Oak.
 Cascade Roller Mills, Cascade.
 Dunskin, D., Empire Mills, Marshalltown.

Durst, Godfrey & Co., Milling and Cereals, Danbury.
 Dayton Grist and Feed Mill, Dayton.
 Dysart Grain Co., Buffalo Center.
 Davenport Elevator Co., Davenport.
 Doud, Eli H., Milling Co., Boone.
 Des Moines Elevator Co., Wm. Shepherd, Sec., Des Moines.
 Dyersville Milling and Grain Co., Dyersville.
 Dubuque Turbine and Roller Mill Co., Dubuque.
 Derby Mill and Elevator Co.
 Ensign & Gordon Flour Mill, Harwarden.
 Edwards, Moses & Son, Flour Mill, Albia.
 Fallgetter Bros. Flour Mill, Marshalltown.
 Farmers' Milling Co., Algona.
 Fleming Milling Co., Parkersburg.
 Farmers' Milling Co., Algona.
 Field, C. C., Elevator, Charles City.
 Grant City Roller Mills, Grant City.
 Gehlen & Bros., Milling Co., Le Mars.
 Gate City Milling Co., Keokuk.
 Grimes & Co., Flour Mill, Colesburg.
 Harris & Co., Grain, Fuel and Gas, Sibley.
 Hull Roller Mill Co., Hull.
 Harbeck & Petersen, Tri-City Roller Mills, Davenport.
 Hartley Grain and Feed Mill, Hartley.
 Harris, W. W., Grist Mill, Hedrick.
 Hazeltine Bros. Flouring Mill, Brighton.
 Harp & Roberas, Millers, Iowa Falls.
 Hast & Adams, Flour Mill, Anita.
 Huishel & Co., Flour Mill, Hamburg.
 Independence Milling Co., Independence.
 John Struve Roller Mills, Clinton.
 Jones & Buchanan, Wholesale and Retail Flour, Ottumwa.
 Linn Grove Flour Mill, Linn Grove.
 Martin Milling Co., Sioux City.
 Mystic Milling Co., Sioux City.
 Meek Bros. Flour Mill, Bonaparte.

MILLING, FLOUR AND GRAIN—CONTINUED.

Malvern Flour Mill, Malvern.	Spencer Elevator and Grain Co., of Iowa Superintendent's Office, Minneapolis.
Marcus Milling Co., Marcus.	Shannon & Mott Co., Flour and Cereals, Des Moines.
Mt. Pleasant Milling Co., Mt. Pleasant.	Shellhorn Martin Flour Mill, Boone.
Metcalf Flour Mills, Anamosa.	Smith & Co., Flour Mill, Ida Grove.
Mathews Milling Co., Hedrick.	Stuhr, D. H., Grain and Flour Co., Davenport.
Marvin, J. H., Feed Mill, Fayette.	Siebel Roller Mills, Flour, Oskaloosa.
Newton Steel Cut Mill Co., Newton.	Sanborn Roller Mills, Sanborn.
Northern Roller Mill Co., Humboldt.	Spencer Milling Co., Spencer.
Northwestern Iowa Grain Co., Mason City.	Smith Bros. & Co., Flour Mill, Elkader.
Porter, T. L. & Co., Flour, Burlington.	Thiele, R. & Co., Milling, etc., Emmetsburg.
Peavey Elevator Co., of Iowa, Superintendent's Office, Minneapolis.	Union Milling Co., Flour, Waterloo.
Phoenix Milling Co., Davenport.	Van Buskirk & Co., Flour Mills, Shenandoah.
Plymouth Milling Co., LeMars.	Vall, C. D., Grain and Commission, Muscatine.
Quaker Milling Co., Manchester.	Wallace, T. A., Milling Co., Belmond.
Red Cross Milling Co., Council Bluffs.	Winterset Flouring Mill, Winterset.
Replogles & Co., Rolling Mills, Red Oak.	Wellman, F. A., Opera House and Feed Mill, Monona.
Rogers & Coughlin, Milling Co., Eagle Grove.	White Wheat Flake Milling Co., Marion.
Riverside Milling Co., Davenport.	Wesley Milling Co., Wesley.
Rooseveltd Bros., Flour Mill, Ackley.	
Rockwell City Flour Mill, Rockwell City.	
Sibley Milling Co., Sibley.	
Shenandoah Milling Co., Shenandoah.	
Sioux City Milling Co., Sioux City.	

MILLINERY (WHOLESALE AND RETAIL).

Kaufman, F., Wholesale Milliner, Dubuque.	Royal Millinery Mfg., Des Moines.
Lyman Bros., Wholesale Millinery, Cedar Rapids.	Sterne, M. & Co., Wholesale and Retail Millinery, Keokuk.
Lederer Strauss & Co., Wholesale Millinery, Des Moines.	Schocier, H. & N., Millinery, Clinton.
Mason Millinery Co., Des Moines.	Simon-Fleenniken & Co., Millinery Mfrs., Des Moines.

MUSICAL INSTRUMENTS, SPORTING GOODS AND AMUSEMENTS.

Burlington Pipe Organ Mfg. Co., Burlington.	Edner, F., & Sons, Sporting Goods, Burlington.
Baer, D. W., Instrument Case Mfg., Avoca.	Grand Opera House, Burlington.
Beal, A. B., Bill Poster and Theatrical Mgr., Sioux City.	Hopkins Sears Co., Sporting Goods, Des Moines.
Chase, W. P. & Co., Sporting Goods, Burlington.	Riddell, W. J., Bicycles and Sporting Goods, Des Moines.
	Verney Pipe Organ Mfg Co., Mason City.

OAT MEAL AND CEREAL MANUFACTURES.

Rogers Cereal Co., Boone.	Grape, H. R., Cereal Mill, Hamburg.
Riverside Rolled Oats Mfg., Riverside.	Great Western Cereal Co., G. W. Brown, Mgr., Sioux City.
Muscatine Oat Meal Mfg., Great Western Co., Muscatine.	American Cereal Co., Cedar Rapids.
	Anchor Mill Co., Cedar Rapids.

PAINT MANUFACTURES.

Van Ninwigen, A. P., Paint Mfg., Pella.	Iowa Paint Mfg. Co., Fort Dodge.
Stearns Paint Mfg. Co., Davenport.	Everlasting Paint Mfg. Co., Des Moines.

PAINTERS, DECORATORS AND WALL PAPER HANGERS.

Anderson & Abel Co., Painters and Decorators, Sioux City.	Bradenburg, E., Paints and Wall Paper, Muscatine.
Allen & Hazeltine Wall Paper and Paints, Cedar Rapids.	Bartlett, M. E. Wall Paper and Paints, Cedar Rapids.

PAINTERS, DECORATORS AND WALL PAPER HANGERS—CONTINUED.

Ellerd, George, Painter and Decorator,
Sioux City.
Ellerd, Alfred, Painter and Decorator,
Sioux City.
Hansen Glass and Paint Co., Sioux
City.
Holland & New Wall Paper and Paint-
ing, Des Moines.
Hill, George, Wall Paper and Paint-
ing, Keokuk.
Interior Decorating Co., Des Moines.
Jennings Wall Paper Co., Des Moines.
Kuechmann, J. F., Paints and Wall
Paper, Muscatine.
Mullen, G. A., Wall Paper and Paints,
Cedar Rapids.

Price Bros.' Wall Paper and Painting,
Keokuk.
Rasmussen, Ole, Wall Paper and
Painting, Council Bluffs.
Stoner Wall Paper and Decorating Co.,
Des Moines.
Somers & Mears, House Painters,
Burlington.
Stillwell, Bryon, Paints and Wall
Paper, Iowa City.
Somers & Mears, House Painters,
Burlington.
The Newborg Co., Painters and Dec-
orators, Dubuque.

PAPER AND WOODENWARE (WHOLESALE AND RETAIL).

Brown Paper Mfg. Co., Fort Madison.
Burlington Paper Co., Burlington.
Clinton Paper and Woodenware Mfg.
Co., Clinton.
Ford Paper Manufacturing Co., Clin-
ton.

Hyde Paper Co., Burlington.
Langan Woodenware and Paper Deal-
er, Des Moines.
Rees McFarland Paper Co., Keokuk.
Tama Paper Mills and Filler Mfg. Co.,
Tama.

PERFUMES AND TOILET GOODS, MANUFACTURES.

Wilson Close & Co., Perfume Mfg.,
Iowa City.

Cannon, W. D., J. E. & Co., Perfumes,
Iowa City.

PLUMBERS, STEAM AND GAS FITTERS.

Auracher, Geo., Plumber and Heater,
Creston.
Bixby, J. C., & Son, Plumbing and
Heating, Council Bluffs.
Boehmler, Theo., Hardware and
Plumbing, Cedar Falls.
Bosch, C. G., Plumbing and Gas Fit-
ting, Burlington.
Burnside & Hallam, Plumbers, Des
Moines.
Capital City Plumbing Co., Des
Moines.
Crane Co., Plumbing Supplies, Sioux
City.
Davenport Heating and Plumbing Co.,
G. T. Ahrens, Sec., Davenport.
Des Moines Plumbing Co., Des Moines.
Ellis & Foster, Plumbing and Heating
Mfg. Co., Waterloo.
Ewinger, Henry, Plumbing and Heat-
ing, Burlington.
Fawcett, Peter, Plumbing, Burlington.
Fitts, C. T., Plumbing and Heating,
Sioux City.
Fort Dodge Plumbing and Heating Co.,
Fort Dodge.
Gearing, John Co., Plumbing and
Heating, Sioux City.
Hogan, H. A., Plumbing and Heating,
Sioux City.
Iowa Heating and Plumbing Co., Dav-
enport.
Kendall, Geo., Plumber and Heating
Mfg., Clinton.
Krelg & McEleney, Plumbers and
Heating, Burlington.

Kurtz, L. H., Plumbing and Heating,
Des Moines.
La Velle & Hogan, Plumbing and
Heating, Sioux City.
Linehm & Mohle, Plumbing and Heat-
ing, Dubuque.
Maher & Kurtz Plumbers, Iowa City.
Messner & Co., Plumbing and Heating,
Cedar Rapids.
Mollart, C., Plumbers and Steam Fit-
ters, Decorah.
New York Plumbing Co., Council
Bluffs.
Noble & Durkin Plumbing and Heat-
ing, Sioux City.
Reed Heating and Plumbing, Mar-
shalltown.
Scott, Wm., Plumber and Heater,
Charles City.
Shepard Plumbing Co., Des Moines.
Sioux City Heating Co., 616-5th St.,
Sioux City.
Sioux City Plumbing Co., Henry Wust-
hoff, Sioux City.
Sonthag, H., Plumbing and Heating,
Davenport.
Stephan Bros., Plumbing and Heating,
Council Bluffs.
Stewart & Hayden, Plumbers and
Heaters, Burlington.
Sutton, W. L. F., Plumbing Co.,
Keokuk.
Valliquette, The Plumber, Sioux City.
Wallace & McNamara, Plumbing and
Heating, Des Moines.
Walker, A. H., Plumbing Co., Des
Moines.

POULTRY PACKERS AND DEALERS.

Armour & Co., Poultry and Eggs,
Hampton.
Atlantic Poultry Packing Co., Atlantic.
Hansen, E. D., Wholesale Eggs and
Poultry, Maquoketa.
Keokuk Poultry and Chicken Co.,
Keokuk.
Kuttler Wholesale Fish, Dubuque.
Ottumwa Poultry Co., Ottumwa.

Swift & Co., Poultry and Packing Co.,
Leon.
Swift & Co., Butter, Eggs and Poultry,
Sheldon.
Swift & Co., Poultry Packers, Shen-
andoah.
Wright Smith & Sons, Poultry Pack-
ers, Charles City.

PUBLISHERS, PRINTERS AND BINDERS.

- Acres Blackmar Printing and Binding Co., Burlington.
 Age Publishing Co., Clinton.
 Allen Printing Co., Clinton.
 Alton Printing Co., Fort Madison.
 Anundson, S., Publisher and Printer, Decorah.
 Batslan, W. H., Printer and Publisher, Sioux City.
 Boone Blank Book Co., Boone.
 Boone County Democrat, Boone.
 Boone County News, Boone.
 Bishard Bros., Printers, Des Moines.
 Burton, F. L., Printing Co., Ottumwa.
 Byers & Thorpe, Newspaper, Mt. Pleasant.
 Campbell, J. E., Printing House, Des Moines.
 Carroll Blank Book Co., Carroll.
 Carter & Goldwaith, Publishers, Boone.
 Catholic Printing and Publishing Co., Dubuque.
 Centerville Citizen Publishing Co., Centerville.
 Chassel, Ferguson & Chesterman Pr'tg and B'dg, LeMars.
 Clark, John, Printing and Binding, Bedford.
 Clinton Herald Publishing Co., Clinton.
 Columbia Printing Co., Burlington.
 Cook, A. G., Blank Book Mfg., Ottumwa.
 Cooper, David S., Book Publisher, Burlington.
 Conrad Lutz & Sons, Printing and Publishing, Burlington.
 Constitution Democrat Co., Keokuk.
 Courier Blank Book Mfg., Ottumwa.
 Courier Printing and Publishing Co., Ottumwa.
 Creston Gazette Pub. Co., Paul McLean, Creston.
 Deitch & Lamor Co., Printers and Binders, Sioux City.
 DeLong, Harvey, Printing and Publishing, Council Bluffs.
 Democrat Publishing Co., Davenport.
 Des Moines Daily News Publishing Co., Des Moines.
 Des Moines Printing Co., Des Moines.
 Doubraski, Wesley, V., Star Printer, Cedar Rapids.
 Duncombe Bros., Publishers, Fort Dodge.
 Egan & Anderson, Printing and Binding, Atlantic.
 Egbert Fidler & Chambers Printing and Binding, Davenport.
 Eureka Hotel Register Co., Dubuque.
 Evening Journal, O. F. Elder, Washington.
 Farmers' Tribune Publishing Co., Des Moines.
 Fay Bros., Printing and Publishing, Clinton.
 Freeman Tribune Publishing Co., Webster City.
 Free Press Publishing Co., Mt. Pleasant.
 Gardner, A., & Son Printing and Binding, Atlantic.
 Gate City Co., Keokuk.
 Gazette Publishing Co., Burlington.
 Gem City Newspaper, Fort Madison.
 Goodyear-Marshall Publishing Co., Cedar Rapids.
 Hall & Paige Printing Co., Creston.
 Hartman, W. D. Co., Publishers, Waterloo.
 Harris, R. H., Printing, Dunlap.
 Hawk-Eye Co., Newspaper, Burlington.
 Hedge-Wilson Co., Binders and Publishers, Oskaloosa.
 Herron & Menton, Printers and Publishers, Boone.
 Hoffman Bros., Publishers and Printers, Oskaloosa.
 Holst, M., Bindery Co., Cedar Falls.
 Homestead Printing Co., Farm Journals, Des Moines.
 Iowa City Publishing Co., M. Remley, Iowa City.
 Iowa Printing Co., Des Moines.
 Iowa Publishing Co., Boone.
 Iowa Tribune, Burlington.
 Independent American Publishing Co., Creston.
 Jarnagin, J. W., Publisher and Printer, Montezuma.
 Journal Printing Co., Fairfield.
 Journal Printing Co., Muscatine.
 Junkin, W. W. & C. M., Newspaper, Fairfield.
 Keehn-Haffner Printing Co., Burlington.
 Kelly, John C., Printing Co., Sioux City.
 Kenea & Lane, Publishers and Printers, Clarinda.
 Kenyon Printing Co., Des Moines.
 Keokuk Publishing Co., Keokuk.
 Leader Publishing Co., Wm. P. Halligan, Manager, Davenport.
 Leak Printing Co., Keokuk.
 Lefebvre Ledger Manufacturing Co., Cedar Rapids.
 Lewis & Wallace, Printers, Des Moines.
 Lischer, H., Printing Co., Davenport.
 Lisle, C. A., Newspaper and Printing, Clarinda.
 Lutheran Publishing House, Decorah.
 Marshalltown Printing Co., Marshalltown.
 Mercer, S. M. & C. F., Printing and Binding, Iowa City.
 Kimball, Fred L., Creamery Journal, Waterloo.
 Lake City Blade, Publishers, Lake City.
 Lawrence Press Co., Cedar Rapids.
 Messenger Publishing Co., Geo. Roberts, Manager, Fort Dodge.
 Midland Swedish Publishing Co., The Svithlod, Des Moines.
 Miller, Geo. A., Printing Co., Des Moines.
 Morehouse Blank Book Mfg., Council Bluffs.
 Morrison Printing Co., Creston.
 Murphy & Co., Calendar Mfgs., and Printers, Red Oak.
 Murphy Publishing Co., Vinton.
 Muscatine Record Publishing Co., Muscatine.
 Muscatine News-Tribune Co., Muscatine.
 Muse & Conroy, Publishing and Binding, Mason City.
 Mt. Pleasant News, Mt. Pleasant.
 National Publishing Co., Cedar Rapids.
 New Hampton Tribune, New Hampton.
 Nonpareil Publishing and Printing Co., Council Bluffs.
 Norris Bros. Printing Co., Eldora.

PUBLISHERS, PRINTERS AND BINDERS—CONTINUED.

- North America Publishing Co., Burlington.
 Oelwein Record, Wm. Reed, (Dem.), Oelwein.
 Oelwein Register, (Rep.) Oelwein.
 Oskaloosa Blank Book Co., Oskaloosa.
 Oskaloosa Journal, Oskaloosa.
 Palmer, Winall Printing Co., Dubuque.
 Park Phillips Label and Printing Co., Cedar Rapids.
 Parrott Bros. Printing Co., Waterloo.
 Perkins Bros., Publishers and Printers, Sioux City.
 Petersen, Adolph & Bros., Publishers, Davenport.
 Post Publishing Co., Fort Dodge.
 Purinton, Printing and Binding, Boone.
 Rank, Anthon, Printing and Binding, Fort Dodge.
 Ray & Cowden, Publishing and Printing, Grinnell.
 Reed & Mohr, Book Binders, Davenport.
 Register-Leader Publishing Co., Des Moines.
 Republican Printing Co., Cedar Rapids.
 Republican Publishing Co., Davenport.
 Republican, The, Law & James, Fort Madison.
 Republican Printing Co., Iowa City.
 Richards & Cassell, Printers, Des Moines.
 Roberts & Roberts, The Democrat, Fort Madison.
 Schrader & Hardie, Printers and Binders, Dubuque.
 Shockley Bros. & Cook, Printers, Oskaloosa.
 Sioux City and Chicago Newspaper Union, Ready Prints, Sioux City.
 Snyder & Hurd, Printing and Binding, Cedar Falls.
 Smith-Morgan Printing Co., Dubuque.
 Stahl, Sam T., Book Binder, Keokuk.
 Stanton Printing Co., Stanton.
 Star Engraving Co., Des Moines.
 Talbott-Koch Printing Co., Des Moines.
 Talbott-Ammons, Printers Des Moines.
 Telegraph-Herald Printing Co., Dubuque.
 The Burlington Journal Co., Burlington.
 The Gate City Co., Newspaper, Keokuk.
 The Gazette Co., Cedar Rapids.
 The Press Publishing Co., Ottumwa.
 Times-Herald Co., Mason City.
 Tribune, Newspaper, Fairfield.
 Times Publishing Co., Davenport.
 Times-Republican, Newspaper, Marshalltown.
 Tribune Printing Co., Sioux City.
 Tryon, E. E., Printer and Binder, Ft. Dodge.
 Tuttle-Furman Co., Blank Book Mfrs., Webster City.
 Union Printing Co., Dubuque.
 Vinton Eagle, Publishers, Vinton.
 Wallace Publishing Co., Des Moines.
 Warburg Publishing Co., Waverly.
 Waterloo Times-Tribune Co., Waterloo.
 Welch, J. H., Printer and Binder, Des Moines.
 Western Newspaper Union Printing Co., Des Moines.
 White, Lewis D., Bookbinder, McGregor.
 Woodford & Ainsworth, Printers, Council Bluffs.
 Young, Lafe, Daily Capital Publishing Co., Des Moines.

PUMPS AND WINDMILL MANUFACTURERS.

- Chandler, A. A., Windmills and Plumbing, Cedar Rapids.
 Chandler Pump Co., Cedar Rapids.
 Bruns & Eldridge, Windmill Mfrs., Waverly.
 Beckman Pump and Scale Mfrs., Des Moines.
 Grahl & Petersen Roofing Co., (Metal) Council Bluffs.
 Key City Roofing Co., Cedar Rapids.
 Key City Roofing Co., Dubuque.
 National Roofing Co., Council Bluffs.
 Smedley Steam Pump Mfg., Dubuque.
 Rawlins & Hummel, Windmill Mfgs., Elliott.
 Red Jacket Pump Mfg. Co., Davenport.
 Morse, B. B., Pumps and Windmills, Decorah.
 Iowa Windmill and Pump Co., Cedar Rapids.
 Dempster Mfg. Co., Windmills and Pumps, Des Moines.

RUBBER STAMP MANUFACTURERS.

- Tomlinson, G. & L. Co., Rubber Stamp Mfrs., Mt. Pleasant.
 Sioux City Rubber Stamp Mfg. Co., Sioux City.
 Ottumwa Stamp Works, Ottumwa.
 Des Moines Rubber Stamp Works, Des Moines.
 Cranz, J. G., Rubber Stamp Mfr., Osage.

RUG MANUFACTURERS.

- Barmelser, Harry, Rug and Mat Mfr., Dubuque.
 Clarinda Rug Mfg. Co., Clarinda.
 Capital City Rug Mfg. Co., Des Moines.
 Clinton Rug Mfg. Co., Clinton.
 Dresser & Carnahan, Rug Mfrs., Des Moines.
 Eureka Rug Mfg. Co., Mason City.
 Eureka Rug Mfg. Co., Des Moines.
 Economy Rug Mfg. Co., Webster City.
 Flexible Steel Mat Mfg. Co., Marshalltown.
 Hamacher, Wm., Rug Mfr., Cedar Rapids.
 Osage Rug and Mat Mfrs., Osage.
 Ottumwa Rug Mfg. Co., Ottumwa.
 Reliable Rug Co., Des Moines.

SASH, DOOR, BLIND AND OFFICE FIXTURES.

Anderson, A., Planing Mill and Fixture Mfr., Des Moines.	Iowa Mantle Mfg., Emil Lange, Mgr., Davenport.
Carr, Ryder, Adams Co., Sash and Door Mfrs., Dubuque.	Kurtz Bros., Sash & Door Mfg., Marshalltown.
Curtis Bros. & Co., Sash Door Mfrs., Clinton.	Lamb, C. & Sons, Lumber, Sash and Doors Mfg., Clinton.
Corning Sash and Door Mfg. Co., Corning.	Leach, Geo. N., Sash and Door Mfg., Independence.
Cedar Rapids Wood Working Co., Waterloo.	Merrit & Pictall, Woodwork Mfg., Cedar Rapids.
Carter, S. C. & S., Sash and Door Mfg. and Lumber, Keokuk.	Muscatine Sash and Door Mfg. Co., Muscatine.
Curtis Bros. & Co., Sash and Door Mfrs., Sioux City.	McClelland, T. W., Sash, Doors and Blinds, Davenport.
Charlesworth, Will, Refrigerator Mfr., Newton.	M. A. Disbrow & Co., Sash and Door Mfg., Clinton.
Capital City Mantel Mfg. Co., J. G. Berryhill, Mgr., Des Moines.	Nairn Gillies & Co., Sash, Doors and Blinds, Burlington.
Cedar Valley Woodwork Mfg. Co., Webster & Fuller, Cedar Rapids.	Osage Sash and Door Mfg., Osage.
Dubuque Woodenware and Lumber Co., Dubuque.	Oskaloosa Wood Working Co., Oskaloosa.
Dubuque Pattern Works, Dubuque.	Roberts, U. N. Co., Sash, Door and Blind Mfgs., Davenport.
Farley Loetcher Co., Sash and Door Mfrs., Dubuque.	Smith, Geo. P., Sash, Doors and Blind Mfgs., Charles City.
Fort Dodge Sash and Door Mfg. Co., Fort Dodge.	Schmidt-Henry, Sash and Door Mfg., Keokuk.
Goddale & Rassmussen, Woodworking Mfg., Atlantic.	Stelling, P. J. & Co., Sash Door and Blind Mfg., Davenport.
Getchell-Martin, Sash, Door and Fixture Mfrs., Des Moines.	Schmidt Bros., Sash, Door and Blind Mfg., Davenport.
Harmon, J. D., Sash and Doors Mfg., Burlington.	The Naurman Co., Bank and Store Fixtures, Waterloo.
Hesston, Geo., Bank Fixtures, Mfg., Pella.	The Calmar Sash and Door Mfg., Calmar.
Huttig Bros., Sash and Door Mfg. Co., Muscatine.	Voss Bros., W. H. and F. P., Stair Builders, Davenport.
Harper, J. V. & Son, Woodwork Mfg., Mason City.	Winter, Ed. B., Sash, Doors and Blinds Mfg., Burlington.
Iowa Falls Mfg. Co., Bank and Office Fixtures, Iowa Falls.	

SCALE MANUFACTURES.

Bergman & Tripp Automatic Scale Mfg. Co., Newton.	Monarch Mfg. Co., Scales, etc., Des Moines.
Des Moines Scale Mfg., Des Moines.	Tyrell, Nathan, Scale Mfg., Council Bluffs.
Kimball Bros., Scale Mfgs., Council Bluffs.	

SOAP MANUFACTURES.

Blom, Peter, Soap Mfr., Keokuk.	Haskins Bros., Soap Mfrs., Sioux City.
Beach, Jas. & Sons, Soap Mfrs., Dubuque.	Iowa Rendering Works, Sioux City.
Clinton Scap Co., Clinton.	Iowa Soap Co., Burlington.
Dahms Sons & Co., Rendering Works, Sioux City.	Marshalltown Vinegar & Soap Mfg. Co., Marshalltown.
Frith, E. & F., Rendering Works, Dubuque.	Mathes, W. C., Sec. Davenport Soap Mfg. Co., Davenport.
Gray & Tucker, Soap Mfrs., Columbus Junction.	Prouty-Bowler Soap Mfg., Des Moines.
	Puck Soap Mfg. Co., Des Moines.

STARCH MANUFACTURES.

Mosley Horne Starch Mfg., Keokuk.	Hublinger Bros.' Starch Mfg., Keokuk.
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STOCK YARDS AND STOCK COMMISSION COMPANIES.

Adams Ranch, Live Stock and Produce, Odebolt.	Des Moines Union Stock Yards, Des Moines.
Boyer, G. W., Live Stock Commission, Sioux City.	Fort Madison Stock Yards Co., Fort Madison.
Becker & Degan Live Stock Commission, Sioux City.	Ingwersen & West Co., Live Stock and Commission, Sioux City.
Cook, A. E., Ranch, Live Stock and Produce, Odebolt.	Long & Hansen, Live Stock Commission, Sioux City.

STOCK YARDS AND STOCK COMMISSION COMPANIES.

Lamp & Pletsler, Grain and Live Stock, Mapleton.
 Mallory & Zimmerman, Live Stock Commission, Sioux City.
 McClusky & Hudson and Greenmayer, Live Stock Commission, Sioux City.
 Rowley & Diggs, Live Stock and Commission, Sioux City.

Ryan, Smith & Lacey, Live Stock and Commission, Sioux City.
 Thuett Bros., Live Stock and Commission, Sioux City.
 The Sioux City Stock Yards, Sioux City.
 Waitt & Wiley Live Stock Commission, Sioux City.
 Wiley Cattle Commission Co., Sioux City.

STOCK FOOD MANUFACTURERS AND WHOLESALE DEALERS.

American Stock Food Co., Webster City.
 Cline Food Co., Marshalltown.
 Hawkeye Stock Food Mfg. Co., Red Oak.

National Medicated Stock Food Mfg. Co., Ottumwa.
 Sutts Stock Food Mfg., Algona.

STONE QUARRIES AND CUTTING.

Atlas Slate Co., Marshalltown.
 Asbestine Stone Works, Des Moines.
 Anamosa Quarries, John Rouen, Stone City.
 Allen, W. J., Stone Quarry, Nashua.
 Allison, Sam, Stone Quarry, Charles City.
 Buchan Ellery Co., Stone Quarry, La Porte.
 Bealer, E. J., & Co., Cedar Valley Stone Quarry, Cedar Rapids.
 Bokhorney, Fred, Stone Yards, Cedar Rapids.
 Brazleton, Jerome, Stone Quarry, Monticello.
 Best, Dolph, Stone Quarry, Shell Rock.
 Byrne & Saul Co., Stone Quarry, Dubuque.
 Becker, John, Stone Quarry, Dubuque.
 Beggs, V. A., Stone Quarry, Iowa Falls.
 Cedar Valley Quarry, E. J. C. Bealer.
 Clark, Loram, Stone Quarry, Solon.
 Champion Quarries, J. A. Green & Sons, Stone City.
 Dololnette Stone Quarry, W. Wilkins, Postville.
 Dubuque Electric Stone Works, Dubuque.
 Erickson, F. & Co., Stone Quarries, Stone City.
 Fort Madison & Appanoose Stone Co., Fort Madison.
 Forest, R. D., Stone Quarry, Central City.
 Gray, James B., Stone Quarry, Columbus City.
 Henry, W. R., Stone Quarry, Cedar Falls.
 Kelly, Ed., Stone Quarry, Fayette.

Kemper, Ernest G., Stone Quarry, Burlington.
 Key City Stone Quarry, Dubuque.
 Le Grand Quarry Co., Quarry.
 Lee & Morris Stone Quarry, Brighton.
 Miller, H. M., Stone Quarry, Burlington.
 Marshalltown Stone Co., Marshalltown.
 Mason City Stone Co., Mason City.
 Mt. Vernon Stone Quarry Co., Mt. Vernon.
 Matthews Bros., Stone Quarry, Iowa Falls.
 McKinstry, Hugh, Stone Quarry, Humboldt.
 Mark, Jacob, Stone Quarry, Charles City.
 Nelson, Jens, Stone Quarry, Cedar Falls.
 Paulley, J. A. H., Stone Quarry, Clarksville.
 Parker, Edward F., Stone Quarry, Dubuque.
 Rummell, A., Stone Quarry, Olin.
 Robinson, James, Stone Quarry, La Porte.
 Sehling, Henry, Stone Quarry, Calmar.
 Stoups, John W., Stone Quarry, Elkader.
 Sand Stone Quarry Co., Conrad.
 Torger Moehn Stone Quarry, Decorah.
 The Palisades Stone Quarry, Cedar Rapids, Bertram.
 Thurber, W. O., Stone Quarry, Shell Rock.
 Tobin, James, Stone Quarry, Fayette.
 Tieby Bros., Stone Quarry, Dubuque.
 Voss & DeWinter Stone Quarry, Pella.
 Wasson, John H., Stone Quarry, Columbus City.

STREET RAILWAYS.

Boone Electric Street Ry., and Light Boone.
 Burlington Street Railway and Light Co., Burlington.
 Cedar Rapids and Marion Street Railway Co., Cedar Rapids.
 Des Moines Street Railway Co., Des Moines.
 Dunleaf & Dubuque Bridge Co., Dubuque.
 Dubuque High Bridge Co., Dubuque.
 Eleventh Street Elevator Co., Dubuque.
 Fort Madison Street Railway Co., Fort Madison.

Fenlon Place Elevator Co., Dubuque.
 Interurban Street Railway Co., Des Moines.
 Independence Street Railway Co., Independence.
 Keokuk Electric Street Railway Co., Keokuk.
 Muscatine Electric Railway, Muscatine.
 Mason City and Clear Lake Traction Co., Mason City.
 Ottumwa Electric Street Railway, Ottumwa.
 Sioux City Traction Co., Sioux City.

STREET RAILWAYS—CONTINUED.

State Electric Street Railway Co., Clinton.	Waterloo & Cedar Falls Rapid Transit Co., Waterloo.
Tri-City Street Railway Co., Davenport.	

STRUCTURAL IRON, GRILL AND BRIDGE MANUFACTURES.

Central Iron Works, Structural and Grill, Des Moines.	Fair Williams Bridge Mfg. Co., Ottumwa.
Crellin, Ed. W., Bridge and Iron Works, Des Moines.	Shorthill, A. E., Bridge and Iron Works, Marshalltown.
Clinton Bridge and Iron Works, Clinton.	Sprague Structural Iron Works, Council Bluffs.
Dubuque Architectural Iron Works, Dubuque.	

STUCCO AND PLASTER MANUFACTURES.

Cardiff The, Plaster and Stucco Co., Fort Dodge.	King's Crown Plaster Works, Cedar Rapids.
Chemical Stucco Retarder Co., Webster City.	Lewis Cement Block Mfg. Co., Forest City.
Fort Dodge Stucco and Plaster Mfg. Co., Fort Dodge.	United States The, Gypsum Co., Plaster and Stucco Mfgs., Fort Dodge.

SUSPENDER MANUFACTURES.

Northwestern Suspender Mfg. Co., Des Moines.	Diamond Suspender Mfg. Co., Des Moines.
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TELEPHONE EXCHANGES.

Algona Telephone and Express Co., Algona.	Home Telephone Co., Oskaloosa.
Cedar Valley Telephone Co., Independence.	Humeston Telephone Co., Humeston.
Cedar Valley Telephone Co., Waterloo.	Iowa Telephone Co., General Office for State, Davenport.
Centerville Telephone Co., Centerville.	Marshalltown Telephone Co., Marshalltown.
County Telegraph and Telephone Co., Waterloo.	Martin, E. H., Telephone Co., Webster City.
Creston Mutual Telephone Co., Creston.	Mutual Telephone Co., Des Moines.
Geneva & Seymour Telephone Co., Seymour.	Northwestern Telephone Co., Charles City.
Green & Western Electric Telephone Co., Mason City.	The Mt. Vernon Tele. Exchange, Mt. Vernon.
Harlan & Avoca Telegraph and Telephone Co., Harlan.	Tri-City Telephone Co., Clinton.
Holstein Telephone Co., Holstein.	Western Electric Tele. Co., Britt.
	Western Electric Telephone Co., Estherville.

TENT AND AWNING MANUFACTURES.

Bailey & Caster Awning and Tent Mfg., Ottumwa.	Ehlers & Carsten Tent and Awning Mfg., Davenport.
Brittain, W. H., Awning and Tent Mfg., Sioux City.	Fisher Tent and Awning Mfg. Co., Waterloo.
Burlington Tent and Awning Co., Burlington.	Lamcke, J. M., Tent and Awning Mfg., Council Bluffs.
Clarke Roller Awning Co., Dubuque.	McNiel Awning Mfg. Co., Sioux City.
Cooper Awning Co., Mfg., Cascade.	Waterloo Tent and Awning Co., Waterloo.
Des Moines Tent and Awning Mfg., Des Moines.	

TOW MANUFACTURES.

Brown, A. G., Tow Mill and Mfg. Co., McIntyre.	Northwestern Tow Mfg. Co., A. G. Brown, Elma.
Graham, Arthur G., Tow Mfg., Northwood.	Northwestern Tow Mfg. Co., A. G. Brown, McIntire.
Klmpf Bros.' Tow Mfg., New Hampton.	Spencer Flax Tow Mill, Spencer.
	Webster, J. C., Tow Mill, Cresco.

TOOL AND TOOL HANDLE MANUFACTURES.

American Mining Tool Co., What Cheer.	Mowrie & Martindale Handle Mfg. Co., Milton.
Blue Oak Handle Factory, Fairfield.	Nichols Carpenter Square Mfg. Co., Ottumwa.
Clover, R. G., Tool Maker, Council Bluffs.	Newcomb Loom Mfg. Co., C. Pasche, Mgr., Davenport.
Davenport Ladder Mfg., 410 Bridge Av., Davenport.	Phillips, Bors & Olson, Tool Handle Mfgs., Farmington.
Dean Loom Mfg. Co., Harlan.	Stockport Axe Handle Co., Stockport.
Eldon Tool Handle Mfg. Co., Eldon.	Star Mfg. Co., Mining Tools, What Cheer.
Hardsoeg Miners Tools Mfg, Ottumwa.	What Cheer Drill and Tool Co., What Cheer.
Jewett Type-Writer Mfg., Des Moines.	
Knapp & Son, Garden Tool Mfg., Charles City.	
Linsay, W., Shovel Handle Mfg., Ottumwa.	

TRUNK MANUFACTURES.

Anthony, D. S., Trunk Mfg., Sioux City.	Des Moines Trunk Mfg. Co., Des Moines.
Adams & Jacobi, Trunk Mfg., Burlington.	Hawyeve Trunk Mfg., Des Moines.
Engler, J. A., Trunk Mfg., Dubuque.	Winstrow, Aug. C., Trunk Mfg., Keokuk.

VINEGAR, PICKLES AND CONDIMENTS.

Amazon Vinegar and Pickle Co., Davenport.	Jones, Samuel, Vinegar Mfg., Sioux City.
Bauer, A. G., Mustard Mfg., Muscatine.	Keokuk Pickle Co., Keokuk.
Burlington Pickle Co., Fort Madison.	Mennig & Slater Vinegar and Pickle Mfg., Des Moines.
Burlington Vinegar and Pickle Works, Burlington.	Osage Pickle Co., Osage.
Cushing, James & Co., Vinegar Mfg., Dubuque.	Ottumwa Pickle Co., Ottumwa.
Davenport Vinegar and Pickle Co., Davenport.	Rollins Vinegar and Pickle Co., Des Moines.
Farmington Vinegar and Pickle Co., Farmington.	Sioux City Cider Mfg. Co., 810 Missouri St., Sioux City.
Heintz Pickle Works, Muscatine.	Warner, Fredlay Co., Vinegar Mfg., Sioux City.
Iowa Vinegar Mfg., Keokuk.	Wineke Hoerr Co., Vinegar Mfg., Dubuque.

WASHING MACHINE MANUFACTURES.

Branmer, H. F., & Co., Washing Machine Mfg., Davenport.	Hawkeye Washing Machine Co., Newton.
Benbow & Branmen, Washing Machine Mfg., Davenport.	Murphy Washer Mfg. Co., Dubuque.
Bischoff & Buege Washing Machine Mfg., Davenport.	Randleman & Son, Washer Machine Mfg., Des Moines.

WATER WORKS FOR CITY SUPPLY.

Anamosa Water Works Co., Anamosa.	Council Bluffs Water Co., Council Bluffs.
Atlantic Water Works, Atlantic.	Cresco Water Works, Cresco.
Bancroft Water Works, Bancroft.	Creston Water Co., Creston.
Bellevue Electric Light and Water Works, Bellevue.	Davenport Water Supply Co., Davenport.
Buffalo Center Water Works, Buffalo Center.	Decorah Water Works, Decorah.
Burlington Water Co., Burlington.	Des Moines City Water Works, Des Moines.
Cascade Water Works, Cascade.	Dubuque Water Co., Dubuque.
Cedar Falls Water Works, Cedar Falls.	Eagle Grove Water Works, Eagle Grove.
Cedar Rapids Water Co., Cedar Rapids.	Eldora Water Works (Jeersen & Krause), Eldora.
Charles City Water Works, Charles City.	Emmetsburg Water Works, Emmetsburg.
Charles City Water Power Co., Charles City.	Fort Madison Water Works Co., Fort Madison.
Charter Oak Water Works (City) Charter Oak.	Garner Water Works (City) Garner.
Cherokee Water Works (City), Cherokee.	Grundy Center City Water Works, Grundy Center.
Clinton Water Works, Clinton.	Guthrie Center Water Works (City), Guthrie Center.
Colfax Water Works (City), Colfax.	

WATER WORKS FOR CITY SUPPLY--CONTINUED.

Hartley City Water Works, Hartley.
 Iowa City Water Co., Iowa City.
 Keokuk Water Works, Keokuk.
 Knoxville City Water Works, Knoxville.
 Lake Mills Water Works, Lake Mills.
 Lemars Water and Light Co., Lemars.
 Logan City Water Works, Logan.
 Manchester Water Works (City) Manchester.
 Marion Water Co., Marion.
 Marshalltown Water Works, Marshalltown.
 Monticello Water Works, Monticello.
 Mt. Vernon Water Works, Mt. Vernon.
 Nashua Water Power Co., Nashua.
 Nevada City Water Works, Nevada.

New Hampton Water Works, New Hampton.
 Osage City Water Works, Osage.
 Oskaloosa Water Co., Oskaloosa.
 Ottumwa City Water Supply Co., Ottumwa.
 Perry Water Works (City), Perry.
 Rock Rapids Electric Light and Water Works (City) Rock Rapids.
 Rock Valley Roller Mill and Water Works, Rock Valley.
 Sheldon City Water Works, Sheldon.
 Sioux City Water Works, E. B. Spaulding, Super., Sioux City.
 Spencer Water Works (City) Spencer.
 Washington Water Works Co., Washington.
 Waterloo Water Co., Waterloo.

WATER TANK MANUFACTURES.

Burnham, W. D., Tank Mfr. and Farm Imp., Charles City.
 Carter Windmill and Tank Mfg. Co., Des Moines.
 Hawkeye Steel Tank Works, Iowa City.
 Jorgensen & Christian Co., Tank and Fixture Mfg., Storm Lake.
 Kelly & Taneyhill, Well and Tank Machine Mfrs., Waterloo.

Keeners' Trough and Tank Mfg., Clarinda.
 Lynch, J. H. Tank and Wagon Mfg., Rock Valley.
 Tallerdar Steel Pipe & Tank Co., Waterloo.
 Waterloo Mfg. Co., Steel Tanks, Waterloo.

WHEEL AND AXLE MANUFACTURES.

Bettendorf Axle Mfg. Co., Davenport.
 Bettendorf Metal Wheel Mfg. Co., Davenport.
 Buffington Wheel Co., Burlington.

Burlington Cycle Works, Burlington.
 Kelly Springfield Rubber Tire Mfg. Co., Davenport.

WHOLESALE ICE AND COLD STORAGE.

Burkley, H. E., Cold Storage, Cherokee.
 Consumers' Ice Co., Sioux City.
 Crystal Ice and Cold Storage, Davenport.
 C. B. Hubbard & Co., Ice Business, Cedar Rapids.
 Davenport Ice Co., Hentleman & Albrecht, Davenport.
 Des Moines Ice and Cold Storage Co., H. E. Teachout, Mgr., Des Moines.
 Diamond Ice Co., Des Moines.
 Fort Dodge Ice Co., Fort Dodge.

Gilbert Bros., Ice Dealers, Council Bluffs.
 Hygienic Ice and Cold Storage Co., Ottumwa.
 Malvern Cold Storage House, Malvern.
 Pure Ice Mfg. Co., Sioux City.
 Palmer, Hubbard & Co., Cold Storage, Independence.
 Stevens Cold Storage Co., Process Butter Mfg. Co., Spirit Lake.
 Welderts, C. & Sons, Ice and Liquors, Burlington.

WHOLESALE FRUITS AND PRODUCE.

Armour & Co., Wholesale Produce, Centerville.
 Burlington Produce Co., Burlington.
 Burns Bros., Wholesale Produce, Charles City.
 Baxter Wholesale Fruit and Commission, Mason City.
 Copeland & Martin, Wholesale Fruit, Burlington.
 Charles City Produce Co., R. & W. Waller, Charles City.
 Clinton Fruit and Produce Co., Clinton.
 Cherokee Wholesale Fruit and Commission Co., Cherokee.
 Daniel, W. B., Fruits and Commission, Keokuk.
 Davenport Produce Co., W. C. H. Hueck, Mgr., Davenport.

Dohs, L. R., Wholesale Fruits and Produce, Fort Dodge.
 Greene Produce Co., Greene.
 Haley & Lang Co., Fruits and Produce, Fort Dodge.
 Haley & Lang Co., Wholesale Fruits and Commission, Sioux City.
 Iowa Grain and Produce Co., Burlington.
 Iowa Produce Co., Fruits, Davenport.
 Lagarmacino Co., Commission Merchants, Burlington.
 Mt. Pleasant Produce Co., Mt. Pleasant.
 Morrison Produce Co., Sac City.
 Morrison Produce Co., Tama.
 McGraw W. J. & Co., Produce and Commission, Sioux City.

WHOLESALE FRUITS AND PRODUCE—CONTINUED.

Melcher, Joseph P., Wholesale Produce, Burlington.
 Palmer & Co., Wholesale Fruits and Candy Manufacturing, Sioux City.
 Rogers Produce Co., Burlington.
 Taft, C. C., Wholesale Fruits and Produce, Des Moines.
 Todd & Craft, Wholesale Produce, Des Moines.
 The Grinnell Produce Co., Grinnell.

The Martin Woods Fruit and Produce Co., Davenport.
 The Hanford Produce Co., Sioux City.
 Walker, M. M., Wholesale Fruits and Commission, Dubuque.
 Waterloo Fruit & Commission Co., Waterloo.
 Western Produce Co., Sioux City.

WHOLESALE LIQUORS.

Arendsdorf, John, Wholesale Liquors.
 Anheuser-Busch Brewing Co., Ottumwa.
 Cheadle, R. S., Wholesale Liquors, Ottumwa.
 Casutt, George, Wholesale Liquors, Dubuque.
 Himmelman, E. J., Wholesale Liquors, Sioux City.
 Jaeger, Lang & Co., Wholesale Liquors, Dubuque.
 Lorenz III Co., Wholesale Liquors, Des Moines.

Manderscheid Sons, Jon & Co., Wholesale Liquors, Sioux City.
 Moerlein Brewing Co., Des Moines.
 Parker, B. F., Wholesale and Retail Liquors, Des Moines.
 Selzer Bros., Wholesale Liquors, Sioux City.
 Silvers, W. E., Wholesale Beer and Liquors, Ottumwa.
 Val Blatz Brewing Co., Sioux City.
 Val Blatz Brewing Co., Cedar Rapids.

WHOLESALE OILS, GREASE AND LUBRICANTS.

Marshalltown Oil Co., Marshalltown.
 Monarch Mfg. Co., Grease and Oils, Council Bluffs.
 Marshall City Oil Co., Mason City.
 Ottumwa Oil Co., M. Bannister, Manager.
 Republic Oil Co., Mason City.
 Standard Oil Co., F. M. Williamson, managers, Davenport.

Standard Oil Co., Sioux City.
 Scholfield, Schurmer & Teagle Co., Wholesale Oils, Des Moines.
 Standard Oil Co., Des Moines.
 Standard Oil Co., Cedar Rapids.
 Standard Oil Co., Keokuk.
 Standard Oil Co., Oskaloosa.
 Standard Oil Co., Clinton.
 Standard Oil Co., Muscatine.

WHOLESALE BUTTER AND EGGS.

Baker Bros., Wholesale Butter and Eggs, Ottumwa.
 Chicago and Dubuque Butter Co., Dubuque.
 Clarinda Butter, Egg and Poultry Co., Clarinda.
 Ellingson, E. M. & Co., Butter and Eggs, Webster City.
 Higley, E. B., Butter and Eggs, Mason City.
 Iowa Pure Butter Co., Keokuk.
 Lillburn Co., Wholesale Butter and Eggs, Ottumwa.
 Murphy, J. A., Wholesale Butter and Eggs, Fort Madison.

Pond & Co., Butter and Eggs, Burlington.
 Pond, S. P. & Co., Butter and Eggs, Keokuk.
 Red Wing Butter and Egg Co., Sheldon.
 Taylor Co., Butter and Cheese, Bedford.
 Whipple & Co., Egg Shippers and Candler, Oskaloosa.
 Whitney, G. L., Produce and Eggs, Iowa Falls.
 Wood, Andrew & Co., Butter and Eggs, Marathon.

WIRE GOODS AND FENCE MANUFACTURES.

Bloomer Manufacturing Co., Wire fences, Council Bluffs.
 Blnder George Wire Fence Co., Burlington.
 Deming Fence Manufacturing Co., Sioux City.
 Des Moines Wire Works, W. B. Allison, Manager, Des Moines.
 Denning Fence Works, Cedar Rapids.
 Herman & Savage Wire Fence Works, Sioux City.

Iowa Gate Manufacturing Co., Cedar Falls.
 Iowa Fence Manufacturing Co., Manchester.
 Musgrave Wire Fence M'fg., Des Moines.
 Miller, J. H., Fence M'fg., Monmouth.
 Mason, Alex. Gate Mfg., Fort Madison.
 Trenk Wire Works, Dubuque.
 West Bend Woven Wire Fence Co., West Bend.

WOOLEN GOODS MANUFACTURES.

Balch, J. A. Wool Carding Mills, Lake Mills.	Maquoketa Woolen Mills, Maquoketa.
Davenport Wool Goods M'fg., Davenport.	Meek Bros., Woolen Good. Manufacturers, Bonaparte.
Duncan, S. D., Woolen Goods M'fg., Mitchell.	Nashua Woolen Mills, Nashua.
Jones, J. S., Woolen Goods M'fg., Manchester.	Sheuerman Bros., Woolen Goods Manufacturers.
Lonsdale, John, Woolen Goods M'fg., Dale.	Sterling Woolen Goods M'fg., Farmington.

MISCELLANEOUS MANUFACTURES AND EMPLOYERS.

American Bung Manufacturers, Davenport.	Eureka Paste Machine Co., Davenport.
Bradley-Davis Manufacturing Co., New Hampton.	Eureka Manufacturing Co., Manufacturing and Repairs, J. S. Gladstone, Chariton.
Brown, J. L., Manager Eureka Manufacturing Co., Chariton.	Faultless Baking Powder Manufacturing Co., Cedar Rapids.
Button, J. C., Manufacturing Co., Iowa Falls.	Fawcett, C. E., Electrical Goods, Cedar Rapids.
Carroll Novelty Works, Carroll.	Godfrey, M. J., Boat Builder, Clinton.
Cedar Falls Manufacturing Co., Cedar Falls.	Hawkeye Manufacturing Co., Tama.
Chamberlain & Kinst, Paste Manufacturers, Davenport.	Kretchnes Manufacturing Co., Bee Supplies, Red Oak.
Cherry, J. F., Egg Case Fillers Manufacturing Co., Cedar Rapids.	Mason City Manufacturing Co., Mason City.
Davenport Cremation Society, J. H. Harrison, Manager, Davenport.	Reibel, Leon, Jr., Artificial Limb Manufacturer, Chariton.
Davy Manufacturing Co., Mason City.	Waukon Iron Mine Co., P. D. Murphy, Waukon.
Dubuque Bill Posting Co., Dubuque.	Welss Hents, Manufacturer Egg Case Fillers, Waterloo.
Dupont, E. J., De Nemours Co., Black Powder M'fg, Keokuk.	Williams Manufacturing Co., Hartley.

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